

Established 1840.

THE

Sixty-Fourth Year.

Southern Planter

A MONTHLY JOURNAL

DEVOTED TO

Practical and Progressive Agriculture, Horticulture,
Trucking, Live Stock and the Fireside.

OFFICE: 28 NORTH NINTH STREET, RICHMOND, VIRGINIA.

THE SOUTHERN PLANTER PUBLISHING COMPANY, - - - - Proprietors.

J. F. JACKSON, Editor and General Manager.

Vol. 64.

JULY, 1903.

No. 7.

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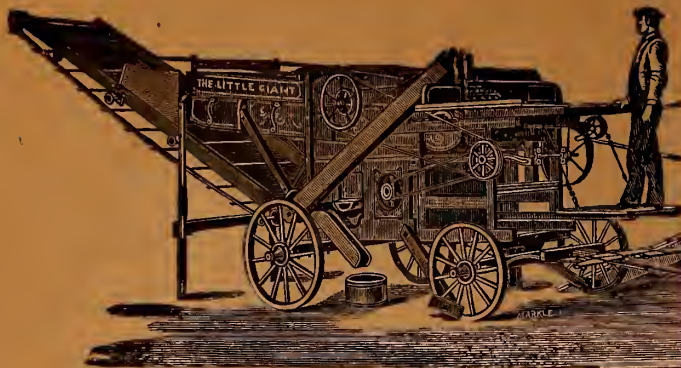
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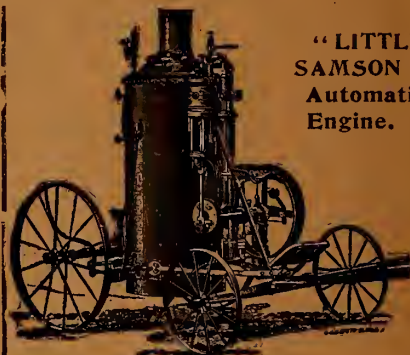
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Agriculture is the nursing mother of the Arts.--XENOPHON.
Tillage and pasturage are the two breasts of the State.--SULLY.

64th Year.

Richmond, July, 1903.

No. 7.

Farm Management.

WORK FOR THE MONTH.

At this season of the year it has usually been our practice to review the progress and condition of the crops throughout the country, and endeavor to present some idea of what the probable returns are likely to be and to point out deficiencies and make such suggestions for meeting these as are still capable of being carried out. The unusual weather conditions which have prevailed more or less over the whole country since the commencement of the crop-planting season renders this work this year a difficult one. The great disturbing factor in the crop situation in the South was, first, the unseasonable weather in the month of March, when we had practically May weather; and, secondly, the unseasonable weather of April and May, when we had a March temperature with a drought. The March weather forced the wheat, oat and grass crops into rapid growth and then the cold and drought of April and May checked this so suddenly as greatly to impair the vitality of the crops. On the first of May we had the prospect of one of the finest wheat crops ever raised in the South. Since that time its condition has been one of constant impairment, and now at harvest time the yield promises to be below the average. Oats have suffered in like manner, whilst the hay and clover crops are seriously curtailed. Throughout the rest of the country the winter wheat crop has been greatly injured in some sections by drought and in others by flood, so that the average condition as reported on the first of June is 82.2, as compared with 92.6 on May 1st; 76.1 on June 1, 1902, and a ten-year average of

79.1. The spring wheat crop is considerably less in area than a year ago, but its condition compares favorably with the ten-year average. The oat crop is nearly 1,000,000 acres less in area than a year ago, with an average condition below that of the ten-year average.

The indications from these figures would seem to be for smaller grain crops than those of last year, and it is probable that they will be even less than these figures indicate, as the full extent of the loss of crops in Kansas, Iowa and Illinois by recent floods was not known at the time when these returns were made up. It would seem to be wise policy for farmers to be in no hurry to sell their wheat. Future prices, in our opinion, will be higher, rather than lower.

The corn crop of the South starts its growth very unfavorably for a heavy yield. The stand is everywhere reported to be uneven and late in starting, and much of the crop has been planted on land poorly prepared. The drought of May made the land break up cloddy and since this broke the rains have been so frequent as to prevent that cultivation necessary to correct this condition. The month of June, up to this writing, has been, throughout nearly the whole South, much too cool for corn to grow, and complaint is frequent of the bad color of the crop. Corn which does not grow off quickly and make continuous rapid growth rarely makes a satisfactory yield. We are, however, hoping to see now some

summer weather and this will, if it comes, help the crop materially. There is plenty of moisture in the soil, and this is a great factor in the growth of the crop.

The tobacco crop was late planted, and much of it set out in land too dry for the young plants to have a chance to start growth at once. Since it was planted the weather has been too cool for the best progress, and so prospects are not of the brightest. The reports we receive lead us to believe that there is a less area planted than last year.

The cotton crop prospects are distinctly unfavorable, as the average condition on the 26th of May was only 74, as compared with 95 on May 26, 1902, and a ten-year average of 86. This condition is for the cotton States as a whole, and for Georgia, Alabama and Texas in particular—the lowest condition ever reported at this season of the year. The crop is almost everywhere from ten to twenty-one days late. There is an increase in the area planted of over 1,000,000 acres.

The drought of May has materially reduced the hay crop of the country generally, and indications are that this will have the effect of causing firm prices to prevail during the year. Here, whilst the earliest crops have been much shortened, there is yet time for much of this deficiency to be made good by second crops.

Reviewing these conditions it would not seem that prospects are of the brightest, but with a fine late summer and fall there is yet the chance that southern farmers may not be amongst those who will suffer most. There is yet ample time to plant forage crops to make good any deficiency in the hay crops and for fodder, and we would urge that no efforts should be spared to attain this end. The probable shortage of the corn crop should be supplemented by cow peas planted for a seed crop.

Prices for all farm and truck crops and for stock keep good, and with such prospects as we have indicated for future crops and with the enormous consumption which a fully employed population calls for, we see no reason to anticipate any drop in these. Whatever the farm produces can be readily sold, and at a paying price. We would, therefore, urge the production of everything possible.

The cultivation of the corn crop should receive very particular attention this month, as upon the effectiveness of this work will largely depend how far the present backward and unpromising condition of the crop is to be improved upon. With such cultivation as can, and ought to, be given, and with the moisture now in the land, if we have only hot weather this condition can be so improved as to bring the yield nearly up to the average. Few farmers appreciate what an important factor the presence of abundant moisture in the land is to the well doing of the corn crop and how necessary it is to conserve it. In experiments made at the Wisconsin Experiment Station it has been found that it requires about 310 pounds of water to produce a single pound of dry matter. By figuring up the amount of dry matter in an 80-acre field of corn and multiplying by 310 the pounds of water that are required to produce the crop will be secured. The result is astonishing.

It does not seem possible that such an enormous quantity of moisture can be secured by the corn plants during the growing season, and, more important than all, this moisture, in most part, is used during July and August, the months of least rainfall in the year; so it can easily be seen that the conservation of the moisture in the soil is an exceedingly important problem, and one which every corn grower in the country will find it profitable to investigate.

The Illinois Station conducted exhaustive tests of the comparative amount of moisture conserved by the different methods of cultivation. Two things were found to be true: First, that deep cultivation conserves soil moisture; and, second, that frequent cultivation conserves the moisture most effectively of all plans of cultivation. It was found that in the deep cultivations, despite the excess of moisture, the yield was very low, compared with shallow culture. To find the cause of this an extensive series of experiments with the pruning or cutting off of the roots of the corn plant was conducted.

In this root-pruning experiment a field of corn was selected and one row was root pruned two inches deep. This root pruning was done with a broad, sharp spade. The spade was set down about six inches from the stalk of corn in the hill on every side of the hill. The spade was pushed down into the soil and a guard allowed it to penetrate just to the depth planned for in the experiment. The whole field was cultivated with a weeder and all weeds not removed in this way were cut out by hand. This was done so that the rows of corn would receive equal cultivation and be under like conditions. The pruning was

done three times in the season at about the ordinary times of cultivation. The second row was not pruned and the third row was pruned four inches deep. The fourth row was not pruned and the fifth row was pruned six inches deep. This was repeated until a large field was treated in this manner.

The resulting yields were as follows for three seasons: Not pruned, 62 bushels an acre; pruned two inches deep, 60 bushels an acre; pruned four inches deep, 45 bushels an acre; pruned six inches deep, 30 bushels an acre.

In fact, these, and all other similar experiments, simply prove that any injury to the roots of the plants reduces the yield. The amount of this reduction was about in proportion to the number of roots cut off. These experiments explain very clearly the reduction of the yield by deep cultivation.

The results of experiments, and from practical experience, are to the effect that continued cultivation, keeping a loose mulch on the surface of the soil, gives the best results. The general practice coming into vogue among the most progressive and successful corn growers is that after corn reaches a height to interfere in cultivating with the ordinary two-horse cultivator, to use a single horse with a five-tooth harrow or drag and cultivate between the rows of corn during the setting of the ears on the stalks. The yields to the acre of 100 bushels have been secured by this plan, and experience has proved it to be practical and successful on a large scale.

With the results of these experiments before you cultivate shallow, cultivate frequently, and the result with the land so full of moisture, as it now is, will probably be a yield of corn which may suffice to make good the deficiency which an ungenial May, and consequent late planting, threatens.

Let the same careful and frequent cultivation be given the cotton and tobacco crops. The same principles apply to these as to the corn crop, though these being crops having a less widely ramified root system there is less danger of root pruning in the middles of the rows with somewhat deeper cultivation than would be safe with the corn crop.

When it is impossible longer to continue cultivation without breaking down the stalks or leaves, then lay the crop by *level*, and in doing so seed the land with cow peas or crimson clover, sapling clover and a small quantity of rape, say two pounds to the acre, so that when the principal crop is harvested there will be something left growing on the land to conserve

fertility and moisture and prevent washing, and at the same time furnish fall, winter and spring grazing for stock.

After the small grain crops have been harvested, and when not seeded in grass or clover, run over the stubble with a disc harrow and sow either cow peas or crimson clover or sapling clover or rape, with some wheat or oats mixed with these, and thus find the land something better to do than grow a crop of weeds, which only impoverish the land and make no contribution towards carrying the live stock of the farm or even furnish more than the very smallest quantity of vegetable matter for making humus. It is of vital importance to the maintenance and enhancement of the fertility of land in the South that some cover crop should be kept on the land at all times. Naked land becomes reduced in fertility faster than when growing a crop.

Where clover or grass has been seeded with the small grain crops see that the weeds, which spring up as soon as the crops are cut, are not allowed to flower and seed. There doing so robs the grass and clover of moisture and plant food and often makes a good stand at the cutting of the crop a failure before winter sets in, and in any event sends it into winter weakened and tender, and hence more subject to winter killing. Set the mower high enough to clip the weeds without taking too much off the clover and grass and leave the weed cuttings as a mulch. These will sink down into the bottom and form a protection to the roots in winter.

This month and August are the best times for seeding dwarf Essex rape for fall, winter and spring grazing for sheep, hogs and young cattle. This crop is most valuable for this purpose, but cannot be cured for dry forage. An acre of rape has been found to be the equivalent of 2,767 pounds of grain when fed to hogs at the Wisconsin Experiment Station. Sheep and lambs fatten on it quickly, but it is not fit to feed to milch cows, as it is apt to taint the milk. Three or four pounds of seed will sow an acre broadcast or two pounds will sow the same area in drills two feet apart. It makes a heavier crop when sown in drill and cultivated two or three times.

Prepare land for rutabagas and turnips. These crops, in order to be grown successfully, require the land to be finely broken and be in a good state of fertility. A dressing of 500 or 600 pounds of acid

phosphate per acre will be found profitable, even on good land. Rutagabas should be sown this month or in the first half of August. They make a crop that keeps better than common turnips and are better feed for stock. With heavy fertilization with farm-yard manure and acid phosphate—twenty-five or thirty tons to the acre—can be easily grown, and they will be found of inestimable value in the winter for feeding cows, sheep and hogs. They are best sown in drills 2 feet 6 inches apart. After the plants have made two or three leaves they should be thinned out in the rows so as to stand six or eight inches apart, and should be kept cultivated and free from weeds. Two pounds of seed will sow an acre in this way. If sown broadcast four pounds of seed will be needed. Turnips may be sown in August and September.

Soy beans and cow peas intended for hay should be cut when in bloom or when the first pods are formed, and should be raked into windrow after they have wilted and partially dried and be allowed to cure in these rows for a day and then be put into cock to complete the curing. In this way the leaves, which are the richest part of the plant in food value, will be saved and bright, green hay will be made. After standing in cock a few days open out after the dew is off and sun for an hour or two and haul to the barn and pack down tight. If free from rain, water or dew the hay will keep perfectly, even though still having considerable natural moisture in it. It will heat considerably, but this will not injure it if not disturbed until cool again. Sorghum for hay should be cured in the same way. Cut before the plant blooms and seed forms.

Millet of the different varieties—German, Hungarian and Cat-tail—may yet be sown for hay and will be ready for cutting in from sixty to seventy-five days. Earlier-sown crops should be cut and made into hay as they come into bloom and before the seed forms. We consider German millet the best variety to grow for a hay crop. Sow a bushel of seed to the acre on finely prepared land and roll after sowing.

When threshing the wheat and oat crops see that the straw and chaff are carefully saved, and have the straw put up into stacks of a convenient size for being put into the barn—a stack at a time—when needed. With good, sweet straw, roots and cow peas or soy-bean hay, young cattle can be kept growing and improving all winter, and will make a large heap of manure for the improvement of the land.

ALFALFA.

In our last issue we wrote an article in which we strongly encouraged the growing of alfalfa in the South, and dealt with some of the problems involved in the production of the crop. We will now take up one or two other factors which lack of space then compelled us to pass by. Before doing so, however, we want to bring to the notice of southern farmers what is being done in one Southern State (Louisiana) in the production of alfalfa and what a source of profit it is found to be. In that State a considerable number of cotton planters have for several years grown the crop experimentally, and within the past two or three years have become so satisfied of its profitableness that they are now growing it largely for market. One of these gentlemen, Mr. W. L. Foster, who has four hundred acres planted, says: "It seems to me that this queen of all hay and forage plants is too little understood, otherwise there would not be a ton of hay shipped into Louisiana. On the contrary there would be thousands of tons shipped out of the State at a better profit than is made on cotton, even at present high prices. I am not chemist or botanist enough to say on what lands in the State it will grow *profitably*, but believe that with proper expenditure of time in preparation, manuring and nursing it can be made to grow any where in the State. I have seen it growing luxuriously on the poor and worn hill land of the Experiment Station in North Louisiana, but much time and expense was required. On the river lands between Baton Rouge and New Orleans it seems to thrive well, and on the Red river it seems to be perfectly at home. I may say that I use it as a *profit* crop on our low, stiff, red lands that will not produce profitably any other crop. Its value as a feed for horses, mules, cows and hogs is unequalled by any other food. Hogs will make splendid growth on it and fatten readily without any other feed, and that, too, with twenty or twenty-five to the acre, where it grows well. Again, it is a fine fertilizer crop. Your land is improving each year it grows on it, and when you wish to get rid of it (which will be *never* unless you want to plant it somewhere else) it is as easily killed as oats or corn. * * * I am free to say that if alfalfa hay is worth as many dollars per ton as cotton is worth cents per pound, I would prefer to raise the alfalfa. On our soils, with ordinary seasons for growing and harvesting, we get three to five cuttings, averaging from one half to a ton of cured hay per cutting, and bringing in our market at Shreveport from \$8 to \$15 per ton. The cost of handling varies,

of course, with the seasons. It costs just as much to cut and rake one half ton per acre as it does to cut and rake a tone per acre. From my experience, and my alfalfa account, it costs an average of \$1.25 to \$2.00 per ton to put in shape for the market. An intelligent negro near our plantation, who works twenty mules raising cotton, told me he had sold \$500 worth of surplus hay per year off twenty acres. For the last two years off sixty acres he has sold enough to very nearly *make his cotton crop clear*. I think a very conservative estimate would be \$15 to \$30 per acre net per year, not counting the pasturage in fall, winter and spring. My advice to every one who works land would be to plant a small patch of alfalfa for trial. If he succeeded with it he would have the most valuable crop that grows; if he failed it would be the most laudable failure he ever made. In 1900 my overseer made with wage hands 253 bales of cotton costing in money outlay \$4,500 and bringing on the market \$10,575. In 1901 the same man with the same labor, on poorer land, harvested 1,100 tons of alfalfa, selling in car-load lots for \$15 per ton, or a total valuation of \$16,500, with a money outlay for labor and machinery repairs of \$1,500. In one case it required about 45 per cent. of the gross value of the cotton to get it ready for the market; in the other it required only 10 per cent. of the gross value of the alfalfa to put it on the market."

With such testimony as this from a southern grower in favor of the crop there should be no hesitancy on the part of all southern farmers in making an effort to secure a stand of alfalfa. In our article last month we pointed out the importance of getting rid of weeds before attempting to grow the crop and also the necessity for lime to render the land slightly alkaline before seeding. Like all the clovers, alfalfa cannot grow in acid soil, nor can the microbes, which are so essential to the luxuriant growth of the crop, flourish and multiply in acid soil. Without these present the crop cannot obtain the nitrogen which it needs from the atmosphere, nor can the land be improved by its growth. Wherever these microbes are absent in the soil the success of the crop cannot be assured. It is, therefore, of great importance that the best means of securing them should be considered. In Illinois, where the growth of alfalfa is being encouraged, it was found that even in the rich prairie soils there was not a sufficient supply of nitrogen for the crop to make a luxuriant growth, and as the soil was not infected with the bacteria necessary to enable the crop to get its nitrogen from the atmosphere, the yield was not satisfactory. Dr. Hopkins,

of the Illinois Experiment Station, set about to conserve the soil nitrogen and obtain the required quantity of that element from the air. He accomplished this by obtaining from Kansas bags of soil taken from fields of alfalfa in which the bacteria were known to be present, and this soil he sowed on plots of alfalfa at the Experiment Station. Adjoining plots were uninoculated. In the fall of the same year a marked difference, which is still very pronounced, was noted in the growth of the alfalfa on the infected plots and untreated plots, the plants on the former being vastly more vigorous and luxuriant than those on the latter. Results quite as conclusive as showing the effectiveness of inoculation have been secured by Illinois farmers from the Wisconsin line to Cairo. Wherever infected soil is used rapid and abundant growth is induced. Examination showed that tubercles were plentiful on the roots of the plants in the inoculated soil, and this proved Dr. Hopkins's theory of soil inoculation. Plants in the uninoculated plots drew their nitrogen from the soil which, although very fertile, contained an inadequate supply to enable the plants to grow apace with their neighbors that derived nitrogen from the atmosphere. He asserts that "No crop grown in Illinois requires such large quantities of nitrogen as alfalfa." Large quantities of manure or commercial fertilizer containing nitrogen might have been applied to the uninoculated plots, but even this course, it is now known, could not have produced the enormous growth of alfalfa which was obtained on the infected plots.

Dr. Hopkins recommends the use of about 100 pounds of the infected soil per acre. It may be sown when the alfalfa is sown or after any cutting of the crop the first season. The Illinois Experiment Station now supplies the farmers of that State with bags of infected soil at the cost of 50 cents per 100-pound bag, and wherever this infected soil has been applied, and the conditions of soil and preparation for the crop have been good, there alfalfa has grown most successfully.

Mr. Ralph Allen, of Tazewell county, Ill., writing on this subject in the Breeders' Gazette, says:

I seeded a field of four acres last year and met with both marked success and complete failure—success in that portion of the field where the soil was inoculated and failure where there was no inoculation. My field was thoroughly prepared and a very even stand obtained. At the time of seeding I sowed about one acre across the field with soil infected with alfalfa bacteria, or, in other words, with soil in which alfalfa had grown successfully with its root tubercles in abundance. I applied about 100 pounds of this

soil to the acre. The whole field grew well during the summer, and root tubercles were found in abundance six weeks after seeding on a small part of the infected acre where the infection had been very heavily applied. As the season advanced the infected acre began to show more thrift, and at the end of the season was noticeably larger than the uninfected parts. This spring the field presented on May 10th a most convincing proof of the absolute necessity of soil inoculation. The growth of the alfalfa on the infected acre had exceeded our most sanguine expectations. It is of a dark-green color and making an enormous growth. The drainage has carried the infection in streaks and spots to the lower parts of the field, all of which show the same luxuriance. The division line separating a narrow strip of uninfected land on the upper side of the field toward which there has been no drainage is as distinctly marked as the boundary of a field. On those portions of the field where there has been no inoculation the alfalfa is of a pale-yellow color and very much of it is so feeble and stunted that it will soon die out unless assisted. I have procured more soil with which to inoculate these remaining parts of the field.

I would urge those who attempt to grow alfalfa to go at it in the right sure way—do not take chances. Where one man will succeed without systematic inoculation a score of men will fail. To depend on the infection which is in the seed is too hazardous and too expensive, and usually entails the loss of the first seeding with the consequent loss of the use of the land and labor for the year.

Infected soil can be procured for 50 cents per 100 pounds and the freight added. This is enough for an acre. I procured both lots of soil that I used from the Illinois Experiment Station. It may be procured from well-established alfalfa fields where there is an abundance of root tubercles. There is no great mountain in the path; just get the infected soil and sow it broadcast, by hand, if you like, one handful at a throw. Sow at the time of seeding and harrow it in; the little fellows in the dirt will do the rest."

There are already several places in this and adjoining States where alfalfa is growing successfully, and no doubt the owners of these farms will gladly supply small quantities of infected soil to their neighbors. It would be of great service to the Southern States if the Experiment stations and the Test farms, in connection with the State Boards of Agriculture, would follow the example of the Illinois Experiment Station and supply bacteria-infected soil to farmers at a nominal cost. We commend this subject to the attention of the directors of the stations and the Presidents of the State Boards of Agriculture.

It is of such vital importance to the prosperity of the South that successful stands of alfalfa be secured that no efforts should belacking to attain this end. Whilst it is true that a successful stand may sometimes be obtained without the use of bacteria-infected soil, yet the chances are against it being more than a weak stand for a few years, at least, as the bacteria carried with the seed is so small in quantity that it takes a long time to infect a whole field. We would suggest that farmers who have secured a good stand of alfalfa should make the fact known throughour columns and offer to supply small quantities of soil for a nominal cost. We will gladly make the announcement free of charge. With alfalfa secured as a staple crop of the South there is scarcely a limit to be placed on the quantity of live stock which we can raise and feed profitably, whilst as a sale crop it will, no doubt, quickly find a good market.

SILO BUILDING.

In our last issue, when writing on the planting of crops for ensilage, we promised to say something in this issue on the building of a silo. Whilst there are not yet one-tenth of the silos in the South which we hope to see built, yet there is a healthy tone of inquiry about these adjuncts to the storage capacity of the farm which is very cheering to those of us who remember the time when no silo could be found in this State. Every year we receive more inquiries as to the feasibility of building a silo and feeding ensilage, and we have never yet met with the man who has once used a silo and fed ensilage who has discarded the practice and gone back to dry forage stored in a barn or stack. The silo, in a word, is the cheapest barn which a man can build, and ensilage is the nearest approach to food in its natural fresh, succulent state which can be fed to stock. It is also the only barn in which a crop can be stored, either wet or dry, and come out good feed. These being facts, the wonder is that more of our farmers do not avail themselves of such desirable aids to profitable farming. Too often the explanation of the neglect to do so arises from ignorance, and yet thousands of pages of instruction on the matter have been penned and published. The idea that a silo is a complicated and costly structure and the making of ensilage a scientific work has hitherto largely prevailed, and this has sufficed to prevent consideration of the subject. The truth is, that a silo is nothing more than an airtight tub which any common carpenter who knows

how to build a frame building can erect almost as well as a scientific builder, and that ensilage can be made in this tub by any common laborer who knows how to cut up the corn or any other forage crop into short lengths and pack it tightly in the tub. Whilst saying this we do not mean to say that the *best* silo can be built by such a man as we have described, because this would be to disparage the value of scientific knowledge unduly; nor would the common laborer who knows nothing of the laws governing the fermentation of green or succulent feed make as good and perfect silage as the scientist who had given study to the subject. The difference between having the silo built by a good builder having a knowledge of the principles governing the requirements of a practically air-tight chamber to be subjected to a considerable strain, is that in the one case you would get a building which would be likely to last much longer and save much feed in the process of curing, whilst in the other case you would probably find it necessary to rebuild in a few years, and in the meantime lose each year the food which would feed several cows for a week or two. The inexperienced laborer would probably waste a still larger portion of the crop from inattention to careful packing, but even under the conditions of an inexperienced builder and a common laborer, much less of the feed grown would, in all probability, be wasted than is wasted now every year by carelessly leaving the feed out of doors or storing it in a leaky shed or barn. The great advantage which a silo gives to a farmer is that it enables him to store in a small space the produce of a large area and that it keeps the food so stored in that succulent condition which is most conducive to a profitable consumption by stock. It does not add to the feeding value of the crop converted into ensilage, except in so far as the partial cooking which it undergoes makes it probably more palatable and easier of digestion and makes less waste, in that the hard parts of the stalks are softened and so more readily eaten. Another great advantage which a silo possesses is that it enables, nay, requires, that the crop which is siloed shall be cut when in full growth and at a time when its feeding properties are at the best and that it preserves these in that condition and places the food in a shape ready for immediate consumption by the stock, so that whatever may be the weather conditions during the winter, a ration of good, succulent feed is ready at all times for the stock and capable of being fed to them with little trouble and expense. The first point to be considered and decided upon is the size of silo required to meet the needs

of the stock kept. To arrive at this it will be safe to estimate the consumption of silage per day per head of cattle at forty pounds. Multiply this by the number of cattle to be fed and then by the number of days for which feed is to be provided, and you have the number of pounds for which storage is required. Forty pounds may be taken as the weight of an average cubic foot of silage, so that practically each head of cattle will consume a cubic foot of silage per day. In estimating the size of silo required there must be provided not only space for this quantity of silage when settled, but also space for the packing of sufficient feed to make this quantity of settled silage. To provide for this, add one-fourth to the number of cubic feet of settled silage called for. Whilst it is true that silage does not usually settle one-fourth of its original bulk, yet much depends as to this on the size, and particularly the depth of the silo, and this is a safe allowance to be made. The silo to hold this quantity of silage so ascertained, may be either round, square, oblong or octagonal, but we advise the building of a round silo, as the best silage is usually made in a round building, as the settling is usually more perfect and regular, there being no corners to hold the food, and there is usually less waste in a round one, as there are no corners where the food can lie loosely and thus spoil. The most essential point in building the silo is to get the greatest depth with the capacity required. The less the surface exposed to the air when the silo is opened for feeding the less the waste. The greater the depth the better will the silage be compressed and the better the quality of the feed. For guidance in selecting the size of building to be put up, we append a table giving the capacity of round silos of different sizes.

If it is decided to put up a silo of the best construction the plans and specifications adopted in building the two silos at the Virginia Experiment Station may be safely followed. These are two of the best silos we ever saw, and if kept painted inside with pitch and outside with paint, should last a lifetime. They are each twenty-four feet in diameter and twenty-four feet deep from sill to plate, and will hold about 200 tons each. The following were the builder's specifications for building these silos:

Sills.—Sills to be made of two thicknesses, 2 inches by 6 inches stuff cut to required circle in about 3-foot lengths. Lap and spike all joinings and bed in cement.

Plates.—Plates to be made of single 2-inch by 6-inch stuff, cut to required circle, halved, lapped and joined only on top of a stud and nailed down tight.

Studs.—Studs to be 2 inches by 4 inches by 24 feet long, well toe-nailed to plate and spaced $11\frac{3}{4}$ inches on centers. Take care to have all studs true and straight. Rafters to be 2 inches by 6 inches, and arranged as shown on drawing. Notch down 2 inches on plate and spike well at all points.

Roof Sheathing.—Roof to be sheated with 1-inch by 2-inch boards, bent to circle, and the boards laid 5 inches from center to center.

Siding.—Outside walls to be covered with a course of $\frac{5}{8}$ th by $5\frac{1}{2}$ -inch ship lap siding, bent to circle and nailed with two ten-penny wire nails at each stud. Inside studs to be lined, first, with dry $\frac{5}{8}$ x4 inch jointed boards of even thickness. Nail at each stud with two eight penny nails. Over this lay a course of one-ply tar paper. Then lay a course of dry tongued and grooved ceiling $\frac{5}{8}$ inches thick and 4 inches face drawn down tight by blind nailing with eight penny nails at each stud, and face nail with two penny nails at each stud.

Dormer.—Construct a dormer window in each roof. Frame stoutly to rafters, and provide a stout glazed sash and frame, frame to be made of 1-inch boards with half inch stop; 3-inch oak sill, $1\frac{1}{2}$ inch outside casing and 1x4 inch inside casing, window to be 3x4 feet glazed, with 12 lights, single thick glass. Hang on 4 inch butt hinges and provide hasp, staple and padlock on outside.

Doors.—There shall be placed three 2x4 feet doors in each silo, each to be on the same vertical line and each opening into chute. These doors are to be made by cutting out the inside lining. Before cutting out put on two battens to each door, two 6 inch strap hinges to each door. After this is done the door may be cut out and will fit snugly. Place a door stop all round, thereby forming a rebate for the door to fit in. Open doors into silo or chute, as directed by superintendent and provide hasp and staple for each door.

Ventilator.—Place a ventilator in roof, as shown in drawing, lower slats to be half inch by 6 inches, turned on angle of 45° , and spaced 3-inch centers and wire gauzed on back to prevent entrance of birds.

Ventilation.—Walls to be ventilated as follows: Siding on outside is to run up and fit close to roof sheathing; siding at top and bottom to be bored with 1-inch holes in a double row, the holes being spaced about 3 inches apart horizontally; cover with bands of wire gauze to keep out mice.

Gutter and Cornice.—Cornice will consist simply of rafter ends and sheathing.

A silo built on the lines of the foregoing speci-

cation will make as fine and durable a building as any one need wish to have. For those who are not in a position to spend the money which such a silo will cost, and yet desire to have silage for their stock, we now give particulars of a stave silo, which is the cheapest form of such a building, and whilst not adapted for a cold northern climate, meets all the requirements of this southern country as a perfect preserver of the feed. We take the particulars from a description given by Professor Nourse, of the Experiment Station, Blacksburg, Va., of such a silo built at Blacksburg before the completion of the silos of which we have given the specifications. He says: "We obtained some green oak lumber (the only kind we could get at short notice), 16 feet long 6 inches wide and 2 inches thick. The edges were dressed by hand. Round iron bands, five in number, large enough to encircle the silo, and with threads on end, were bought and held in readiness for the plank. The silo, erected by contract, was placed in position as follows: The circle, 16 feet in diameter, was marked on the ground and short pieces of plank laid in such position as to cover the mark. Four of the long planks were then set on end on the circle and as far apart as possible. These were held in an upright position by braces in various directions. Two of the bands (made of $\frac{3}{4}$ -inch iron) before mentioned were bent as nearly in a circle as possible and one placed about one foot from the bottom of the planks in the upright position and held there by driving under the band in each plank a twelve-penny nail, bending it up and over the band. The ends of the iron band with the threads on them were run through blocks of cast-iron with two holes through them about two inches apart, and a nut was then placed on each end of the band, thus giving a method for tightening the planks when all were in position. A second band of iron was put about one foot from the top, and when several horses had been made high enough for a man standing on them to reach the top of the silo, then we were ready to set up the rest of the plank. These were put in until the space was all full, each time one was put in a nail being driven part way into the plank and bent over the band. The bands were then tightened somewhat and three more bands were so placed as to make the bands not quite four feet apart. By turning up the nuts on all the bands the silo was soon tight enough for the crop to be placed in. It will be noticed nothing is said about a roof. None was made. The silage was left open to the weather. The only result of this was a slight drying of the surface—not enough to injure it." Pro-

fessor Nourse recommends the following changes in erecting a similar silo as a result of the experience gained in the use of the first one: The lumber used was green oak. On account of its customary warping we would not use it again if other lumber were obtainable. We have taken out some of the planks and put in poplar. There was little loss in this, as the ones taken out were perfectly sound and fit for other purposes. Concerning the iron bands, we followed suggestions of parties who had erected similar silos. I would now do as follows: Procure (as can be usually done) partially worn tire iron from heavy wagons. Get a smith to rivet, not weld, these together so that two bands will go around the silo. Rivet to the ends of these bands short pieces of iron one-half inch thick by 2 inches wide. Bend up 3 inches of this thick iron and punch two three-quarter-inch holes in the turned up portion. For each band procure two bolts a foot long and three-quarters of an inch in diameter. Have threads cut on bolts nearly the entire length and place these bolts through the holes in upturned ends; put on nuts and tighten the silo. These are stronger, cheaper and easier to work than the round bands. In the spring of 1897 we erected a silo twelve feet high by ten feet in diameter, using poplar plank and tire bands. It was filled with oats cut just before they were beginning to turn. The result was perfect; crop kept good to the very side and in as fine condition as could be possible in any silo. To take the silage from a structure of this kind it is necessary to cut apertures at intervals. In our 16-foot one we have two places and in the 12-foot one only one from which we take the product. In refilling we take out the cut planks and insert whole ones again.

The cost of the 16-foot silo was as follows:

104 planks, 16 feet long, 2x6 inches.....	\$16 64
Five iron bands at \$2 each.....	10 00
Contract price for erecting.....	10 00
Nails, about	30
	<hr/>
	\$36 94

The cost of the smaller silo was as follows:

Plank, valued at \$10 per thousand.....	\$ 6 30
Contract for erecting.....	5 00
Four iron bands at \$1.20 each.....	4 80
Nails, about	20
	<hr/>
	\$16 30

The edges of the plank in the smaller silo were not dressed, as we found it entirely unnecessary. Any person can erect a silo of this sort, and if a

farmer has the lumber on his farm the actual cash outlay would be reduced to the cost of the iron bands and nails.

ESTIMATES FOR SILOS.

Estimated size of silo needed, and number of acres required for a given number of cows, for a feeding season of 180 days:

No. Cows.	Estimated Consumption of Silage. Tons.	Size of Silo Needed. Diam. Ht.	Average Acres Corn Needed.
6	20	9x20	1 to 2
9	30	10x22	2 to 3
13	45	11x25	3 to 4
21	74	13x29	5 to 6
25	90	14x30	6 to 7

We have now put before our readers the information needed to enable them to provide either a costly or a cheap silo. Given either the one or the other, there is needed the machinery to fill it. This means a cutting or shredding machine, with an elevator and power to drive these. Wherever more than two or three cows and the like number of horses or mules are kept, a cutting or shredding machine—and we prefer a shredder, as making a more palatable and better consumed food—ought to be a part of the permanent outfit of the farm, with either horse or engine power to drive it. The best power, in our opinion, for a farm is a gasoline engine. It is less liable to cause fire than a steam engine and does not require the special attention of an engineer to run it. It is also economical in working cost, and is ready to run at any moment if supplied with oil. Where such an engine or other power and cutter and shredder is part of the outfit of the farm it can be used to fill the silo, which should be so placed as that this can be utilized. An elevator is needed to carry the cut corn or other crop to the top of the silo. The old style of elevator—an endless band—is now almost superseded by the “blower,” which is much more effective and works without hitch, which could not be said of the endless band elevator. In many sections these outfits for filling silos are now carried round the country from farm to farm like separators. Where this is the case they can usually be used with economy in doing the work. It would, in many sections, be wise economy on the part of a number of neighboring farmers to combine together and buy an engine, corn husker, shredder and blower. We would urge that the question of building a silo be at once given consideration. If it is to be added to the farm—and if once added it will never again be dispensed with—now is the time to build it so that it may be ready to be filled in August and September and the silage be

ready for feeding November or December. A silo means the saving and economical feeding of all the roughage of the farm and the carrying of twice as great a head of stock as is possible without it.

JOHNSON GRASS IN NORTHERN VIRGINIA.

Editor Southern Planter:

I see several readers of the Southern Planter want to know how Johnson grass does north of Richmond. I will tell them my experience with it in Hanover county, on the Pamunkey river. Some ten years back I cultivated some corn in a field that had three or four patches of Johnson grass in it of from a quarter to one acre in each. It is very hard to work any kind of crop where this grass is growing. As to its spreading. The patches are now two or three times as large as they were then, although the land has been cultivated every year by a good farmer. Cultivation won't kill it, but just makes it grow. But one year's pasturing will kill it dead. I ran a fence through a piece of it and put my stock on it, and they not only killed that in the pasture, but on the adjoining land as far as the cattle could reach it through the wire fence. This has been my experience with two pieces in two different years. From one of the pieces I cut four crops of hay, which would average over three feet high at each cutting. I fed it to my horses green and they eat it about like they would crimson clover. It will grow on almost any kind of land, and the richer the better. The piece I cut was on a black sandy loam which would make about four barrels of corn per acre. J. B. LEE.

Hanover county, Va.

GRASSES AND LEGUMES IN EASTERN VIRGINIA AND NORTH CAROLINA.

Editor Southern Planter:

Anent the question of wild grasses in Eastern North Carolina and Virginia, I am moved to wonder not at their paucity, but at their abundance. Why, in my neighborhood, wire or Bermuda grass, Carolina vetch, sweet vernal, bluegrass, orchard grass, red and white clover, timothy and various types of lespidiza (Japan clover) grow on every roadside, lawn and corner of one's garden. I send you by to-day's mail a plant that for the last few years I have noticed in increasing amount on sandy spots that will

scarcely grow anything else, and which I think is a legume. (The plant is a legume; the botanical name is *Trifolium arvense*.—Ed.) I notice stock seem fond of it, and it somewhat reminds me of alfalfa. It would seem to me that any of these grasses would, and could, grow if properly planted and cared for, but it is hard to remove the prejudice our farmers have for anything in the line of grass.

I am a comparative novice in farming, but began right, six years ago, by subscribing for the Planter, and have learned a good deal from it. I tried first crimson clover, but prepared my ground for it and got no stand. The next year I tried sowing the seed in my corn-field behind the corn pullers and had a perfect stand. Learning that a seed-bed must be made that would hold the water up to the top and in reach of the clover roots, which are extremely delicate, I next year ploughed in wheat and then harrowed my bed until so firm that a horse's hoof would not sink in it. Then I rolled in my clover and the result was marvellous. My wheat headed at fifty-four inches so thick it would hold up a hat, and my clover blossomed out at the same time at forty-eight inches, making the prettiest crop I ever saw, and one which the Director of our State Experiment Station said was the finest he ever saw. But I found, and still find, crimson clover hard to cure. And now comes my favorite of all grasses—sand vetch. Six years ago I sent a piece of grass I noticed my horse always headed for in the corner of my garden to Professor Massey for him to name, and he wrote me it was Carolina vetch. I read in the seed catalogue that sand vetch was better than the Carolina, so concluded to try it. Well, I still stick to it. The seedsman said it was hard to cure, but I find it easier than any other to make good hay of. Also, they said it grew four or five feet high. Mine often grows eighteen feet. I send you a specimen of my crop, and I want to know whether I grow it extra heavy or it is only another mistake of the seedsman. (The specimen plant was 9 feet 6 inches in length. This is more than the average.—Ed.) Lastly, they said it was earlier than crimson clover, and that cattle had to be educated to eat it, both of which statements have proved erroneous with me. I find it is only an occasional animal that refuses it at first and that all grow to like it. Lastly, I want to tell the way to cut it: My crop is always so heavy that nothing will hold it up, and even in the middle of our late drought I found wet spots on the ground when I cut it, and this moisture so macerates the stems that a man can readily rake off the vines with a long tined

rake, and this is the way I always cut mine, finding it both effective and rapid.

I will close by relating an anecdote on one of our progressive young farmers—a patient of mine—who came to me the other day and said that he had sent \$10 to a seedsman for Bermuda grass cuttings and that the man had actually sent him wire grass roots, and that he had more than enough of that already.

MORAL: He does not read the Planter.

Edgecombe county, N. C. C. E. NORFLEET.

(Our correspondent is right as to the facility with which grasses and the legumes grow in Virginia and North Carolina when proper encouragement is given. If southern farmers would labor half as hard to secure stands of grass and clover as they do to kill them out, the South would soon be covered with a carpet of green not equalled by any other section of the country, and the result would be permanent prosperity for the growers.—Ed.)

ALFALFA EXPERIENCE IN VIRGINIA.

Editor Southern Planter:

A few days ago I enclosed you a plant which you pronounced alfalfa. Twenty-five years ago I sowed ten acres in alfalfa. It came up very scattering; there was only now and then a plant, so I ploughed it up. The next year I noticed a plant that I thought was alfalfa growing on a poor hillside about one hundred yards from the land I had seeded. This plant was growing near an old stump. I suppose a bird must have dropped the seed. Now and then since that time I have noticed this same plant. Your articles in the Planter have caused me to look after it, especially this spring, and although it has been very dry the plant is vigorous, healthy and looks as if it might stay twenty-five years more. The hillside upon which it grows has been considered too poor to cultivate. That is why it was never ploughed up. The land I sowed the alfalfa on was creek bottom; this plant grows on stiff red land with clay subsoil. Your articles, with this experience, will induce me to try it again this fall.

If you think this experience is of interest enough to publish you are at liberty to do so.

Bedford Co., Va.

A. W. SCOTT.

An onion minced fine in cold slaw improves it for every one who does not object to the flavor of onions.

ENQUIRER'S COLUMN.

Enquiries should be sent to the office of *The Southern Planter*, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

Tomato Worms.

Can you tell me what to do for the tomato worm—the big green one like the tobacco worm. They are not on them yet, but I suppose will be, as they have in years past.

Accomac Co., Va.

THOMAS D. MARTIN.

Hand picking is the only practicable way of dealing with this worm. Paris green will kill them, but it is not practicable to apply this remedy after the fruits are set, as there would be danger of poisoning the consumers of the fruit.—Ed.

Sassafras.

In the April number of the Southern Planter a contributor advises the cutting of persimmon growth in the months of January and February as the time to exterminate it. Will not some one of your contributors advise as to the best way and time to destroy sassafras growth?

Anne Aundel Co., Md.

T. SELLMAN HALL.

In the February and April (1902) issues of the Planter will be found articles upon this subject, giving experience with different methods.—Ed.

Potash for Clover.

Will you kindly inform me if it is any advantage to top-dress clover with potash for the second crop. If so, what amount should be used to the acre?

Isle of Wight Co., Va.

N. PEYTON YOUNG.

No. We do not think you would find any benefit to the clover from the potash. Potash is slow in its action and should be worked into the land some time before the crop is planted for its action to be appreciated. A dressing of nitrate of soda, say 75 pounds to the acre, would no doubt help it to make a heavier crop. This is quick in action. We have seen its effect in ten days.—Ed.

Hog Yards.

I can arrange my hog yards so they will be on high ground or extend them to lower ground, where hogs will have a wallow; but this leaves an unsightly mud hole hard to clean up. Do you think hogs will do as well on high ground as if they were allowed to have a mud hole to wallow in?

Elizabeth City Co., Va.

E. M. FULTON.

Make the hog yards on the high land. Hog wal-

lows ought not to be found on any farm. They are a constant source of disease and trouble, and are not called for by the natural habits or the health of the hogs. The hog is naturally a clean animal, but man, by his neglect of proper surroundings, has made him a synonym of filthiness. Keep them dry and clean and out of dusty beds and the hogs will be healthier and the meat more wholesome. See that there is in the yards an abundant supply of pure spring water always at hand for drinking.—ED.

Rye and Crimson Clover.

Can I plant rye and crimson clover after sweet potatoes and grow it successfully? Could I graze pigs on same during winter months?

Sampson Co., N. C.

SUBSCRIBER.

Yes. Sow as early as you can after digging the crop, so that the crimson clover may have a chance to make as much growth as possible before winter. We would mix some wheat and oats with the crop, as they make better grazing than rye. The crop should make some grazing in winter and good grazing in the early spring.—ED.

Pickle-Making—Storing Irish and Sweet Potatoes.

Please state through your valuable paper formula for putting up cucumber pickles to use through winter—same as those we purchase in kegs from grocers. Also name best method for putting away sweet and Irish potatoes to keep over winter without cold storage.

ISAAC H. DUNLAP.

We regret to say that we are unable to give a receipt for pickling cucumbers. The cucumbers are usually put up in strong brine by the growers and shipped to the pickle factories and are there converted into pickles. Perhaps some of our lady readers can give receipts for making the pickles. We have several times given instructions for storing Irish and sweet potatoes, and will endeavor to do so again in a later issue. It is too early yet to store these crops.—ED.

Ticks on Cows.

My cattle are much troubled with ticks, which seem to get on them when in a certain pasture in which there is some woodland.

The ticks cling between their legs and on the bags of the cows, and are very persistent in sticking on.

Can you suggest a remedy? If you can aid me I will be under many obligations.

Montgomery, Ala.

P. C. MASSIE.

Have all the ticks picked off carefully and then

grease the legs of the cows and the parts where the ticks are most commonly found with fish oil or lard in which a little carbolic acid or kerosene oil has been mixed.—ED.

Pruning Orchard.

I have an orchard that has been planted for over eighteen years. The trees are thrifty enough (one of them, a heavy bearer, is the finest specimen of a tree that I have ever seen), but most of them haven't borne a peck of apples in the whole time. Some of the trees have been struck with the cedar blight—were struck before I knew of the danger; but they were good bearers.

I have always pruned in the spring, but I believe that it has been decided that summer pruning is best for fruit. What I want to know is, in what month will I be safe in pruning? I do not want to prune at a time that will injure the trees.

Davidson Co., N. C.

P. NORTON.

Mr. Thomas, the author of the *American Fruit Culturist*, and one of the best authorities on fruit growing, writing on "Pruning as Affecting Fruitfulness," says: "As a general rule the rapid formation of leaves and wood is adverse to the production of fruit. On the other hand the slow growth of the wood favors the formation of fruit buds and the production of heavy crops. These two adverse tendencies may be more or less controlled by pruning. When the too numerous branches of a tree produce more leaves than can be properly supplied with nourishment, resulting in a feeble or diminished growth, new vigor may often be imparted by judicious pruning, directing the sap into a smaller number of channels and thus increasing its force. For example: Peach trees, after bearing some years, and yielding smaller fruit than on fresh, young trees, will assume all their former thriftiness by partly cutting back the heads. In such operations it is indispensable to observe the rule of cutting back in winter or early spring before the buds have swollen. If trees are too thrifty and do not bear, a check may be given and many of the leaf buds be thus changed to fruit buds by a continued pinching back during the summer. The production of fruit buds may be accomplished artificially by checking the growth of vigorous trees, but such treatment, out of the ordinary course of nature, though sometimes useful, should be cautiously applied, as the first crop gives still another check and often materially injures the tree and the quality of its subsequent crops. Another and unobjectionable mode of attaining the same end is *summer pruning*, which is effected by pinching off

the soft ends of the side shoots after they have made a few inches' growth. In these the sap immediately accumulates and the young buds on the remainder of these shoots, which otherwise would produce leaves, are gradually changed into fruit buds. * * * It often happens when the pinching is done too early that the new buds send out shoots a second time the same season. These second shoots are to be pinched in the same manner as the first."—Ed.

Patenting Fruit Trees.

Is there a law that gives a man the right to patent an apple or any other fruit tree, and if so, does this patent prohibit others, who have the same apple or fruit, from budding or grafting or giving limbs to his neighbor to bud or graft for his own use?

Davidson Co., Tenn.

T. I. FUQUA.

No patent can be granted for the production of an apple or any other tree, but a man may register the name which he gives to any particular fruit, and thereby acquire title to that name, which will prevent the same being appropriated by another grower. This would not hinder his disposing of the scions or buds from the tree in any way he thought proper, but rather would aid him in doing so.—Ed.

Feed Value of Rutabagas.

Please let me know the feed value of rutabaga turnips for hogs and cows.

Duplin Co., N. C.

THOMAS M. DOBSON.

The analysis of rutabagas shows their content to be as follows: Water, 88.01; ash, 1.15; protein, 1.18; fiber, 1.25; nitrogen, free extract (Carbohydrate), 7.66; fat, 0.15. This does not show them to have a high feed value, but experience in the feeding of them has demonstrated that the analysis of their content does not fully disclose their value as a food. They have a cooling action on the stomach and blood, which encourages appetite and stimulates the assimilative powers of the stomach and other organs, enabling better results to be obtained from all the feed given to the animals eating them. In England they form one of the principal winter foods of all feeding stock.—Ed.

Horses Rubbing Mane and Tail.

I have some horses that rub their tails and manes. They have no lice, nor do they show any sign of worms. They are in good condition; they have exercise every day by running to pasture or work. This itching seems to annoy them. I would like to know

some way to prevent the itching and stop them, as it makes them look bad. It seems to be contagious.

Ashie Co., N. C.

EDDIE YOUNG.

Where it is certain that the horses have no lice on them, this rubbing is usually caused by overheating of the blood from too rich food and too little work or exercise. Give a purgative ball and cut off some of the grain feed and substitute a bran mash once or twice a week and feed grass. Give plenty of work or exercise. A little sulphur fed in the mash twice a week will also have a cooling effect. Apply some grease to the roots of the mane and tail, there may possibly be some very small lice. Worms often cause rubbing of the tail. An injection into the anus of a solution of quassia chips in water will give relief from this trouble.—Ed.

Irrigating Land.

I have a farm, lately purchased—creek bottom—with a bold spring on it—a very large spring, in fact—running diagonally through it, with another large, unfailing spring branch on the north side of the farm. These springs afford an abundance of water for irrigation if it could be utilized. Would irrigation by engine and hose be expedient and commendable? Say, use a traction engine of sufficient power, which could also be used for various other purposes, such as for grinding feed or running a grist or flouring mill, etc., etc. This would reduce the cost of irrigation to a minimum and make irrigation feasible, so far as irrigation itself is concerned. But the question troubling me is, Would this manner of irrigation be expedient? For example, would it be expedient to throw a stream of water on your fields and crops during the hours of sunshine? The process of irrigation could commence, say, at 4 P. M. and continue into the night awhile, if it would be inexpedient to attend to it in the heat and sunshine of the day.

You may be disposed to inquire why resort to this method? One reason, the source of the water is, I fear, too low to raise it to the necessary height of carrying it through ditches, and another is the character of the soil is not such as to restrict the water to the ditch. I am a novice in the matter of irrigation and will greatly appreciate suggestions in this line through the Planter.

Hamilton Co., Tenn.

J. W. CLIFT.

This question of irrigating lands outside the arid belt is one which is engaging the attention of the authorities in the Department of Agriculture at Washington, who have already issued several bulletins on the subject. If you will write the Secretary of Agriculture he will, no doubt, have these forwarded

to you. There is no question but that in many cases irrigation can be usefully and profitably used on lands in the East and South, but perhaps in most cases this will be found only to be so when the land is devoted to the production of truck and garden crops, which have a high value and can, therefore, bear a relatively high cost for production. In the case of the staple crops it is doubtful how far the system can be made to pay, especially where cost of pumping has to be incurred. Simple gravity ditch irrigation might be found profitable possibly in many seasons.—Ed.

Raising Colts.

What "points" can some of your subscribers give me as to feeding and general treatment of colts?

Henderson Co., N. C.

R.

Will breeders please notice and reply?—Ed.

Lice in the Hen House—Number of Roosters Required—Fertility of Eggs.

Is it possible to keep a new hen house, built entirely of new wood, free of lice when stocked with chickens raised in an incubator and brooder?

2. How many roosters ought to be kept with 100 hens to be sure of the eggs being all fertile?

3. Are pullet eggs (the pullet about 7 months old) as good for hatching in an incubator as those laid by an older hen?

4. Is a young rooster, same age as pullets, as good as an older one?

Albemarle Co., Va.

AN ENQUIRER.

1. It is practically impossible to keep lice out of any house, but in a new house built as described, and with chickens hatched and raised as described, they may easily be kept in subjection by whitewashing with lime wash in which some kerosene has been mixed, two or three times in the year, so as to cause no trouble.

2. Not more than twenty hens should run with one rooster to ensure fertility of the eggs.

3. Yes. The only drawback to using eggs from so young a hen is that the chickens may lack vitality and strength. Those from a 1 or 2-year-old hen are much more likely to have the required stamina to ensure good growth and resistance to disease.

4. A young rooster is always better than an old one. A year-old bird is in his prime for securing fertility in the eggs.—Ed.

Fig Tree Dropping Fruit.

I have a fig bush on my place that dropped its fruit

when nearly full grown. My neighbors tell me it has done so before, and that as far as they remember the bush has never carried fruit to maturity. This is the first season it is under my observation. The bush looks exceedingly thrifty—very full of leaves of glossy, dark hue. It was spaded around in the spring and thinned, as the stems or trees were very thick. It also received some fertilizer and barn-yard manure this spring, but had been neglected previously, although it certainly looked thrifty all the time. Can you suggest a remedy?

Middlesex Co., Va.

C. DEBRUYNKOPS.

Fig trees are very apt to drop their fruit if at all lacking in moisture at the time of the swelling of the fruit just previous to ripening. Probably this is the cause of your tree failing to mature the crop. The North Carolina Experiment Station, Raleigh, has experimented largely with fig growing and published one or two bulletins on the subject. Probably if you were to write the station they would send you the bulletins, which you might find serviceable.—Ed.

Rotten Oak as a Fertilizer.

Kindly advise me if rotten oak has any fertilizing value.

J. C. JACOBS.

No. It is not worth the trouble of hauling it. The only thing about it worth anything is the small amount of vegetable matter it contains, which adds that much to the humus content of the soil.—Ed.

Improving Gravelly Land for Grass.

The grove in front of my dwelling is a hillside, poor, gravelly soil, well shaded with white and post oak and hickory. I wish to sow same in grass for grazing purposes. Please state in your next issue best method to prepare ground, time to do it, kind of fertilizer and seeds to use, also amount per acre.

Chatham Co., N. C.

ISAAC H. DUNLAP.

This land will require, first, to be improved before it will carry a grass sod. We would plough it and then apply twenty-five bushels of lime to the acre and seed it with a mixture of crimson clover, sand vetch, oats and wheat, say twelve pounds of clover and a bushel of the grain mixed in equal parts. In the spring, say in April or May, plough this crop down and apply 500 pounds to the acre of acid phosphate and fifty pounds of muriate of potash and sow with one bushel to the acre of cow peas. Graze this crop off and then in the early fall plough again and seed down with a mixture of Wood meadow grass, hard fescue, Virginia bluegrass, Kentucky bluegrass, perennial rye grass and white clover, two bushels to the acre. Give with this a dressing of 500 pounds

of bone meal and afterwards top-dress the land with farm-yard manure.—ED.

Nut Grass.

I have a large lawn in front of my house, and upon close examination I find that what we call "nut grass" (a grass that has roots from one to five inches long with little nuts on or about the end) is scattered all over the space in patches. I want to destroy this grass, as it is getting all over my place. I will appreciate it very much if you will give me the surest and most direct method by which to destroy the grass.

JOHN D. WELLS.

Wilson Co., N. C.

The only way to get rid of this grass is to put the land into arable culture and then smother it out with crops. Work the land in a short rotation in which use cow peas for a summer smother and crimson clover and hairy vetch as a winter and spring smother as frequently as possible for two or three years. Plough up the land now and sow crimson clover and winter oats and wheat on it, say twelve pounds of crimson clover and three-quarters of a bushel of oats and wheat mixed per acre. Give a dressing of 300 or 400 pounds of acid phosphate with the crop to ensure a heavy growth. In the spring, say May, plough this crop down and sow cow peas, a bushel to the acre, with 300 pounds of acid phosphate. Follow this crop, which should be cut for hay, with an oat crop and then with crimson clover or vetches again and then seed down to grass again with a dressing of 500 pounds of bone meal.—ED.

Ploughing Land.

Do you think it a good plan when ploughing to lay the land off in what they call "lands" of about six to eight yards in width, then plough around them until ploughed out; then lay off again until field is finished? I notice that all land ploughed in this way washes in great gullies after rains or during the winter where the turning row is left. Will you kindly tell me how a field should be ploughed?

Mecklenburg, Va.

A. B. C.

Land should always be ploughed in "lands," or "beds," as they are called in some sections. The practice of ploughing round and round a field until it is all ploughed is a bad one and can only result in uneven ploughing and unlevel land. There is no reason why ploughing in "lands" should result in washing. This is caused by not laying the lands off in the right direction. They should be so laid off as not to follow the direct fall of the land, but slightly across this, so that each furrow will act like the fur-

rows on terraced land, each carrying only a part of the water and that at such a slight fall as to permit most of it to sink into the subsoil as it flows. Then, if the land is ploughed deep enough, all, or nearly all, the water will be absorbed and conserved in the subsoil for the ensuing crop. Deep ploughing is the cure for washing. On flat land the beds should be narrow and on rolling land wide, so as to ensure drainage in wet seasons.—ED.

Cramp in Horses.

I have a fine mare, 6 years old, that has the cramp badly—one time I made sure she would die. Every muscle in her body seemed contracted. Can you tell me anything that I could give her that would relieve her permanently, or even temporarily.

Wythe Co., Va.

M. H. JACKSON.

What is commonly known as cramp, or colic, in horses is of two kinds, each requiring different treatment. Spasmodic, or true cramp, colic is produced by indigestible food, large drinks of cold water when the horse is heated or driving horses when heated through deep streams*or standing in cold rain or from cold drafts. Spasmodic colic always begins suddenly, the horse stops feeding, stamps violently, lies down, rolls, paws. Then there is relief, apparently, for a time and then the pains return again. The horse makes frequent attempts to urinate, sweats and paws violently. For this form of colic the proper remedies are anti-spasmodics. Probably the best is chloral hydrate, 10 ounces in a half pint of water, given as a drench. A very common remedy is 2 ounces of sulphuric ether and 2 ounces of alcohol in 8 ounces of water. If nothing else is at hand give half a pint of whiskey in hot water. If relief is not given by any of these repeat the dose in an hour. After the pain has subsided give a pint of linseed oil to evacuate the bowels.

The other form of colic is properly known as flatulent colic, or wind colic. This is generally caused by sudden changes of food, too long fasting, new hay or grain, or large quantities of green food. The symptoms of wind colic are not so sudden as those of cramp colic. The horse is dull and paws slightly. The pains are continuous and not spasmodic. The belly enlarges, and by striking it in front of the haunches a drum-like sound is produced. The treatment for this form is the use of alkaline remedies to neutralize the gases found. Give baking soda in doses of from 2 to 4 ounces or the same quantity of carbonate of ammonia every half hour until relieved. Chloral hydrate is also a good remedy given in 1 ounce doses in half a pint of water. These remedies

should be followed by a purgative after the pain is relieved. Barbadoes aloes is the best; give 1 ounce or linseed oil 1 pint. An injection of 1 to 2 ounces of turpentine and 8 ounces of linseed oil into the rectum is of great assistance in getting rid of the wind.—Ed.

Plants for Name.

We have received from several readers two plants for name which are common all through the South. The one is a woolly headed plant and the other a little creeping plant with yellow flowers. The first is *trifolium arvense*, called in some sections rabbit-foot clover, in others mouse ear clover, in others cotton-top clover. Stock will frequently eat this freely and it is worth something for improving land. This, however, is usually regarded as a weed. The other plant is *trifolium procumbens*, known as hop clover. It is practically of no value.—Ed.

Plant for Name.

Please find enclose a bud and a bloom of a plant which is unknown to us. If you know the name of it would like for you to publish in the next issue. It grows from three to five feet high; grows very much like buckwheat; blooms in June and continues until frost, and is relished very much by the bees.

Pittsylvania Co., Va. J. W. RAMEY.

The plant is *melilotus alba* (white melilot or Bokhara clover.) It is not generally liked by stock, but is a good improver of land, as it secures nitrogen from the atmosphere. Its roots also go down deep into the land and bring up plant food and make the land friable.—Ed.

Sick Chickens and Hens.

I have one hundred chickens, eighteen hens and one rooster. My oldest chickens are 3 months old. I have about thirty-five of that age, the rest are smaller and of different ages. I have a large lot and they have access to a corn-field. I keep my hen house thoroughly clean—use ashes and lime on floor and sometimes burn sulphur in it. I use carbolic acid in their drinking water. I feed them mostly on corn bread, sometimes give them corn meal dough with Pratts poultry food mixed with it. I also use black pepper in the food. My oldest chickens have something like cholera—they get droopy, sit with their eyes closed and feathers ruffled, and in a few days die. One of my Plymouth Rock hens has it now, and two of my largest young chickens. I have lost six hens, one rooster and five young chickens. Will you kindly advise me what to do?

Russel Co., Va. MRS B. T. WILSON.

We have complaint from very many different sec-

tions of the South of sickness amongst chickens this year. We attribute this largely to the abnormal weather we have had. We believe it to be mainly caused by the cold, rainy weather. Dryness and warmth are essential to success in chicken raising. Treated as you are treating yours you should be successful, and no doubt would be, if the weather was more genial. Be sure you have no lice on the chickens. Dust them with insect powder and put a little grease on the heads of the young chickens—just a drop of lard in which a few drops of kerosene have been mixed. Keep your houses and coops clean and burn or bury deeply any chickens that may die. We do not believe there is an effectual remedy for chicken cholera if it is once established in a flock. The only way is to remove the healthy birds to another location and let the germs die out at the old place.—Ed.

Curing Pea Vines—Crimson Clover Hay.

1. Will some reader of your valuable paper tell me the best way of curing pea vines? I never have been able to keep them fit for anything.

2. Does crimson clover make good feed when cut and dried?

J. P. McDOWELL.

Halifax Co., Va.

1. We have published a great many different ways of curing pea vines. Mr. Blacknall, of Kittering, N. C., wrote fully on this subject in our September, October and December issues last year. He cures by putting up green on poles set in the ground having cross pieces nailed on to keep the vines from the ground. We have had reports of good success with this method. We know others who cure successfully just as they cure clover. We know that they can be cured successfully by cutting and allowing them to remain as cut until partially cured. Then rake into windrow and allow to remain a day or two, according to the weather, and then put up into cock and allow to remain until nearly fully cured and then carry to the barn and pack away closely into the barn and allow to remain untouched, even though they heat considerably.

2. Crimson clover, if cut just when coming into bloom, makes good hay safe to feed to all stock. If cut after the seed forms the hay is not safe to feed to horses.—Ed.

Seeding Grass—Preventing Washing.

When is the best time to seed Evergreen—fall or winter? Does it do better to seed by itself or with grain?

We have land that washes very badly. What kind of grass will hold it from washing? This land is

creek bottom and is sandy. Some say make a permanent pasture of it. Will you please give me your ideas about it?

W. C. JONES.

Campbell Co., Va.

All grass and clover seed is better sown in the fall than the spring all through the South. Sow in August and September and sow alone without any grain crop. When seeded at this time and in this way, if the land is in a good state of fertility and well prepared, a good stand can be confidently counted on.

The way to prevent washing is to plough deep and to lay off the land in ploughing it so that the furrows run across the fall of the land diagonally, so that each furrow cuts the line of wash and catches and carries into the subsoil the water falling on it. Such a creek bottom as you describe should, if treated in this way, make a good meadow or permanent pasture, if sown with a mixture of red top, meadow fescue, Italian rye grass perennial rye grass and alsike clover. Mix the grasses in equal parts and sow two pounds of the clover seed. Sow two bushels of the grass seed per acre.—ED.

Oats Turning to Cheat.

Will gray winter oats, sown on medium good loam soil, turn into cheat, or must the seed of the cheat have been in the oats or the soil?

SUBSCRIBER.

Stafford Co., Va.

Neither oats nor wheat nor any other grain will turn to cheat or chess. Cheat or chess is a distinct botanical species, and is produced only from its own seed, which is either sown with the grain seed or germinates from seed already in the ground, on its being brought near enough to the surface to become influenced by the sun and air.—ED.

Water Meadow.

I have a meadow of what we term "native swamp grass." It is on a creek and subject to overflow at high water times. It has been mown continuously (most of it) twice a year for the past fifty years or more. When overflowed it is mostly by back water, and consequently *very little* sand has been deposited on it. The grass does not appear to thrive so well on it of late as of yore, averaging now annually about two tons per acre. The surface is too near the water line to plough and cultivate in corn; besides, wish to use for meadow. Can drive all over to mow and haul hay.

Do you suppose that it may be what is sometimes called sod-bound? If so, how would you advise treating it, say, next fall, after the second crop has been taken off and when the land is dry enough to operate

on? Would it pay to apply lime or lime and acid phosphate?

Any light on this subject will be gratefully appreciated.

A SUBSCRIBER.

We think it very probable that the meadow is what is known as "sod-bound." After the second crop is cut we would harrow it with a heavy, sharp-toothed drag harrow, and then rake off the grass and trash harrowed up and apply 50 bushels of lime per acre broadcast and sow 1 bushel per acre of Red Top and Italian Rye grass in equal parts and roll with a heavy roller.—ED.

Threshing Cow Peas and Soy Beans.

1. Can cow peas and soy beans be threshed in a grain separator without breaking the peas? If so, what is to be removed from the separator and at what speed should it be run?

2. Please advise best method and time to harvest same for a seed crop when same is cut with a mower having a pea or clover buncher attached?

An answer through your columns will be greatly appreciated.

X. Y. Z.

Westmoreland Co., Va.

1. Yes. They can both be threshed with a separator. Take out part of the concaves and give all the space possible to allow the vines to pass through easily, and run the machine just fast enough to carry the vines through without winding on the drum. We know farmers who thresh large crops of peas and soy beans every year with the separator.

2. Cut when the greater part of the peas or beans are just turning ripe, and cut when the dew is on. Let the crop lie as bunched by the machine until the vines are partially dry and then put several bunches together into cocks and let stand until cured, when haul to the barn. If the cocks feel damp inside after standing a day or two open out and let the wind and sun into them and then put up again until fit to haul to the barn. Handle as little as possible, and never in the hot sun, so as to prevent wasting the seed.—ED.

Forage Crops.

I should be glad to hear in the Southern Planter your opinion of what beans to sow with oats as fodder.

AN EXPERIMENT.

Fairfax Co., Va.

Canada Peas are the best grain to sow with oats for a forage crop. They should be sown in December or January, and will make an early green forage crop or a hay crop of high feeding value, which may be cut in May. Sand vetch or the English winter vetch may be sown with oats in September and October, and make an excellent forage crop.—ED.

Trucking, Garden and Orchard.

WORK FOR THE MONTH.

Successional crops of sweet corn, pole beans, lima beans and navy beans may yet be planted. Cucumbers for pickles should, if not already sown, be at once got in. In our last issue we gave instructions as to this crop. Blackeye peas may also be yet sown. Sweet potato slips may be set out if not already planted, and cuttings from the earlier planted ones should be put in. These cuttings will make potatoes that will make better seed for next year's crop than that from the earlier planted slips. Cut off the ends of the vines with three or four leaves on them and bury the whole length in the soil except the tip end with two or three leaves. These will soon take root if the ground be moist.

The late crop of Irish potatoes should be planted this month. This crop will make potatoes that will keep all winter. The seed used is northern sets that have been kept in cold storage to prevent sprouting. It is well to spread the sets out for a few days in a shady warm place to encourage the sprouts to start before planting them. Prepare the land well and make rich with a good potato fertilizer rich in potash.

The second crop of Irish potatoes should also be planted this month. This crop is raised from seed grown by the crop planted in January and February. It is a safe crop to raise in all Eastern Virginia and North Carolina and makes seed for the early crop next year, which is much preferred to northern-grown sets, and is, therefore, always in large demand by the truckers of Eastern Virginia. The first crop should be allowed to become nearly fully ripe before digging and then the sets for the second crop be selected from the tubers as they are dug. The sets should be about the size of an egg, as they are to be planted whole or with only just a slip cut off. These sets should, as selected, be spread out in a shady place to green for a few days and then be covered with some light soil and short straw and be made moist to encourage the sprouts. Plough the furrows in which these are to be set deeply by running the plow twice in each furrow. Plant the sets when sprouted in the bottom of the furrows and cover lightly with soil. When the sprouts come through this plough more soil on to them until the furrows are level. Keep level and cultivate frequently. They will continue to grow until late fall and should be dug just before frost

catches them. The essential for success with this crop is to have the sets sprouted before setting.

Celery seed not already sowed should be sowed this month. In our last issue we gave directions as to this. Where the seed has germinated and plants are growing these should be drawn from the seed-bed and set out in a bed to grow on for subsequent planting in the rows so that they may become stout, stocky plants and not be drawn by overcrowding. If the leaves are long and spindling shorten them back with the shears. This may be repeated if necessary to keep the plants stocky.

Seed may be sown towards the end of the month for raising broccoli and fall cabbage. These crops can both be successfully raised in Middle and Eastern Virginia and North Carolina if the plants be not raised too early. They should be ready to set out in September. The seed-bed should be in a moist, shady place and the young plants should be dusted with tobacco dust to keep off the bugs.

Keep the cultivator running in the growing crops to keep down weeds and encourage growth.

The budding of trees should have attention now. In our last issue will be found instructions for this work.

Sow cow peas, crimson clover or sand vetch on all land cleared of crops not wanted for any other purpose. Don't grow weeds, they are unprofitable.

ORCHARD AND GARDEN NOTES.

During the very dry season that has prevailed over a large extent of the State, frequent shallow, level cultivation has been necessary for good crops in the orchard and garden. If our advice has been followed the beneficial effects are, no doubt, plainly visible at other places, as they are in our garden.

Keep up the cultivation till the middle or last of this month. Then sow some Whip-poor-will cow peas to keep the ground from washing during fall and winter, and also to add some fertilizer to the soil, which is being constantly depleted by clean cultivation and by washing rains.

If the peas are sown in rows about two feet apart so that one or two cultivations can be given the crop better results will be obtained than by broad casting and giving no cultivation.

I consider the cow pea the cheapest and best fertilizer the farmer can use to improve much of the worn soil of the Southern States. By the time this appears in print I expect to have sown some in my corn during the last cultivation to supply fertilizer to the wheat crop, the seed of which will be sown in October.

Insects have been very serious with us this year. The plum curculio has stung a large per cent. of our plums. One of the best ways I have found to fight the plum curculio is to destroy all "wormy fruit." Perhaps hogs are the best things to gather up such fruit.

The rose chaffer appeared on our grapes in large numbers. We succeeded in poisoning the insect by using four ounces of London purple and one pound of lime mixed with twenty-five gallons of water and spraying this on the vines thoroughly. The same preparation kills the "potato-bugs."

The time to can fruits and vegetables on the farm has come. Put up a large quantity for family use. Prepare to open one can a day for ten months in the year. This would be no difficult thing to do, if some preparations are made before hand. Nearly everything except corn and beans can be put up on the cooking stove. I have used successfully a small canning outfit specially made for the cooking stove. With it I could put up from one to two hundred cans per day. Not near enough canned goods are put up in the State. We must broaden out along this line. Small canneries can be put up in the towns and small villages at a cost of \$200 to \$400, with a capacity of two to four thousand cans per day. In another State where I have tested and recommended such canning outfits, the canning industry has made immense progress. Now let Virginia move up along this line. More will be said about this subject later.

The time for sowing seeds for fall crops, such as turnips, radishes, peas, lettuce, will soon be here. They will soon come up and grow off well, if sown in well prepared ground. But there is one thing I want to caution against, and that is never sow turnip seed on land upon which a garden crop is to be grown next year. I have tried it in Texas for two years and in this State this year. The results have been

that the cut-worms destroyed my crops each time. The moths that deposit the eggs of the cut-worms seem especially fond of doing so in the field upon a green, tender turnip bed. The following spring the worms feed on the next crop.

The early purple-top strap-leaf turnip, nonpareil pea, rose-colored China radish and black-seeded Simpson lettuce have done best with me for fall crops.

On a recent visit to the Virginia Polytechnic Institute I was glad to learn that the Department of Horticulture, Mycology and Entomology had been divided. Professor W. B. Alwood was left in charge of mycology and entomology, Professor H. L. Price was put in charge of horticulture and Professor J. L. Phillips in charge of the field work in entomology and crop tests. The division of this work has been needed for some time, and now, that it has come, we look for better things along these lines, though the work has been good in the past.

I was glad to learn also from the chairman of the Board of Visitors that the several changes or additions to the course in agriculture that I had suggested in a recent issue of the Planter were the things the Board wanted to do. Now, if the Board will ask the Legislature for \$50,000 for an agricultural building, instead of of \$20,000, we can stand on the same platform.

The Legislature gave \$200,000 to the Jamestown Exposition to advertise what? To advertise how long?

It gave nothing to increase the agricultural facilities at this institution for teaching the young men of the State in its most important industrial line for a century. Our young men are leaving the farms, many old historic farms are going to waste, the facilities for teaching young men of the State in agriculture are behind the times, and the Legislature let a great opportunity go by.

Pennsylvania recently gave its Agricultural and Mechanical College \$250,000 for an agricultural building and equipment. It has been suggested that \$20,000 would do for the Old Dominion. What think you, farmers, of the State? Do you want your sons to have the benefit of all the latest developments in stock husbandry, plant breeding, forage crops, soil improvement, truck and farm crops, fertilizers, diseases of plants, etc.? Would you like to see an equipment in agricultural lines at this institution that is up to date? If so, sound your Representative this fall before he is elected as to how he stands on

this equipment. If the farmers want such a thing and will ask for it persistently they will get it. If they do not ask for it the politicians are not apt to give it. Fall in line, farmers and horticulturists of the State, and let us ask the Legislature for what we need to strengthen the agricultural work of the State.

Montgomery county.

R. H. PRICE.

FALL POTATOES.

Editor Southern Planter:

Other things being equal, potatoes planted from the 20th to the 30th of July will, in this climate (North Carolina), yield more and better potatoes than those planted in early spring. Therefore, they should not be planted in early spring except for early use and the early market. Potatoes planted about the 20th of July will mature in early fall and may be harvested about the first appearance of frost. Potatoes thus grown will keep in good condition, without sprouting to hurt, until the time for the next July planting arrives. Potatoes grown from the July planting of the previous year may be used for seed for the early spring planting.

A clover or cow pea sod is considered best for potatoes. If said crops, when seeded, were properly supplied with potash and phosphoric acid they have drawn from the air a sufficiency of nitrogen to serve the potatoes.

The drills may be laid off three feet apart. A suitable narrow plow may be run several times in the bottoms of the drills, thus preparing loose beds.

One half the usual application of potash and phosphoric acid may be applied in the drills and mixed with the soil, preferably a few weeks before planting. The application of fertilizer, per acre, may consist of 70 to 140 pounds of muriate or sulphate of potash, or 280 to 560 pounds of kainit in lieu of the muriate of potash, and 180 to 360 pounds of acid phosphate. Sulphate of potash is considered preferable to either muriate of potash or kainit.

Large potatoes are considered best for seed. They have larger eyes and produce larger stalks than small potatoes, and consequently the yield is larger. They may be cut into pieces of two or three eyes each. One party recommends cutting potatoes endwise into quarters and planting the seed ends (the ends that contain the most eyes) down.

Thinning to One Stalk.—Proper tests have shown that the quantity and quality of the potatoes can be

materially improved by thinning to one stalk. Some years ago two adjoining parcels of land of about equal fertility were planted to potatoes. On one parcel the potatoes were planted immediately after being cut. The potatoes for the other parcel were aired for several days, thus becoming much shrivelled before they were planted. The result was that the parcel planted with freshly-cut potatoes produced about double the quantity of tops of the other parcel, but at digging time it was found that the latter had produced about double the quantity of potatoes. The first parcel produced tops, the latter potatoes.

It was evident that said difference in yield was attributable to one of two causes: 1. To the effect produced by curing the potatoes. 2. To the diminished number of tops, a result of curing. If the latter was the cause, similar results could be procured by thinning the plants. After proper tests I satisfied myself that it was the diminished number of plants that increased the yield, and that similar results can be procured by thinning to one plant. After thinning single plants will stand in the drills eighteen inches apart, which I consider plenty close enough, provided that the soil has been properly fertilized.

From that time to the present I have been an advocate of thinning to one stalk. I have had others to test the plan and they all report a material advantage in favor of thinning. But a matter of so much importance needs further tests to determine the merits of said two points, especially the effect of partially curing the potatoes before they are planted.

The New York Experiment Station has recently reported adversely on the subject of thinning potatoes. I suggest further tests.

The plants drawn for thinning purposes can be advantageously transplanted. I have found them to answer well.

Advantages of Mulching.—Potatoes in this climate, whether planted early or late, should be mulched to a proper depth with straw, leaves or other litter, thus keeping the ground cool and moist. By planting in midsummer and mulching we approximate in the early fall the proper temperature to the greatest extent possible. Hence, the superiority of fall potatoes over those planted in early spring maturing in midsummer during the time of our greatest heat.

BRYAN TYSON.

Moore county, N. C.

When corresponding with advertisers, kindly mention the *Southern Planter*.



THE SMALL "PATCH" WELL TILLED.

Editor Southern Planter:

The papers are full of the big men, who, working on a big scale, secure big results. There is not enough said of, or attention paid to, the small, humble workers in our midst.

I want to give you a few "facts, figures and features" respecting a humble colored man and his "patch" of berries. Herewith see a cut or picture of his humble cabin and a portion of his "berry patch."

His cabin is almost hid in shrubbery, the "ivy and the vine." This is an old "befo' de wah" ducky—honest, industrious, hairless and toothless. If he goes by "wat his mudder sed" he is three-score years and ten; but if he counts time or measures the years by the "fun" and "experience" he has had he's more than a "hundred and fifty years old."

He rents a little "jib" or "slipe" or "triangle" or "patch" of one and three quarters of an acre with the cabin thereon, for the nominal sum of \$30 per year.

Among other crops he has three-quarters of an acre in berries. From this three-quarters of an acre he this year sold sixty crates of berries (sixty quarts each) at the average price of 10 cents per quart.

After deducting all expenses, such as picking, freight, commission for selling, cost of crates, etc., etc., and even deducting his entire rent for the year, the old man has made fully \$200 from the three-fourths of an acre.

This is a rather better result, comparatively speaking, than have been secured by any of the larger growers of berries. While we have had cases, this year, where the berry growers have made all the way from \$2,500 clear, clean profit, up to \$15,000, from their berries, none have made as much from a small patch as the old ducky has made.

How this emphasizes the idea of the "little farm well tilled."

If the old colored man, who can neither read nor write, can secure such results with his simple tools, appliances and methods, what may not be done with skill, experience, capital and special fitness?

The intensive, thorough culture of small areas of land means not only the prosperity of the individual, but also of the community, the State and the nation.

A JEFFERS.

Norfolk, Va.

Wooden tubs and pails will keep moist better if turned down upon the cellar bottom and water poured over them, filling the space between the rim.

AMERICAN POMOLOGICAL SOCIETY MEETING.*Editor Southern Planter:*

Will you kindly give publicity to the following in your next issue:

I have received a letter from Mr. W. A. Taylor, Secretary of the American Pomological Society, stating that their biennial meeting will be held in Horticultural Hall, Boston, Mass., on September 10th-12th next. He asks the Virginia State Horticultural Society to send a strong delegation to represent Virginia fruit interests on that occasion.

He further says: "Have you among your membership any fruit originators whose new varieties are worthy of entry for the Wilder Medal under our new plan of award? If so, kindly send their addresses and I will mail them the necessary blanks, etc., for entries. The new plan is being heartily welcomed throughout the country and it is desired that fruit originators everywhere shall share in its advantages."

If any of your readers have new varieties of fruits I shall be glad to hear from them, and would add that one of these medals has already been won by one of our prominent Virginia Horticulturists (the Hon. G. E. Murrell) some four years ago. Let us try to capture another.

WALTER WHATELY,

Secretary Virginia State Horticultural Society.

The following are the members of the delegation appointed to represent the Virginia State Horticultural Society at the biennial meeting of the American Pomological Society in Boston on September 10th-12th next:

Hon. Samuel B. Woods, Charlottesville, Albemarle county.

Hon. George E. Murrell, Fontella, Bedford county.

Hon. S. L. Lupton, Winchester, Frederick county.

Hon. A. M. Bowman, Salem, Roanoke county.

Hon. William H. Boaz, Coveseville, Albemarle county.

Hon. J. Thompson Brown, Briarfield, Bedford county.

Professor J. L. Phillips, State Entomologist, Blacksburg, Montgomery county.

Mr. W. W. Otey, Draper, Pulaski county.

Mr. Walter Whately, Crozet, Albemarle county.

Dr. J. R. Guerrant, Roanoke, Roanoke county.

THE FRUIT EXHIBIT AT ST. LOUIS EXPOSITION.*Editor Southern Planter:*

I am now, along with other departments, com-

mencing my work on the State horticultural exhibit for St. Louis, and I am anxious to get specimens of cherries, berries, peaches and all other summer fruits in quantities of from one quart to two gallons to prepare in solution for exhibition.

I will appreciate it very much if you will give your assistance in this matter, either by sending the produce of your own orchard or obtaining from neighbors and express these fruits direct to me at Richmond, Va., notifying me by postal of shipment, and I will promptly prepare them and give due credit when on exhibition to the person and section furnishing the same.

We want to make the fruit exhibit a fine one, and unless the fruit growers will give me their cordial co-operation it will be impossible to make it as it should be made.

G. E. MURRELL,

Superintendent Virginia Commission.

Capitol Building, Richmond, Va.

WHAT TO DO WITH THE STRAWBERRY FIELD AFTER FRUITING.*Editor Southern Planter:*

The most successful strawberry growers plow up their fields as soon as the berries are all gathered and sow them in cowpeas, thus putting the land in perfect tilth to reset in strawberries the following fall, winter or spring, as may be most convenient. But the vast majority of growers gather two, and sometimes three, crops of berries from the same field. How to do this successfully is the object of this article. Bar off with a turning plow the strawberry rows, leaving unploughed a strip about a foot wide containing the plants. On this strip chop out the plants, leaving them about eighteen inches apart. Always leave young (1-year-old) plants instead of old ones, when possible. In this chopping out also kill all weeds and grass. A week or ten days later sow cotton seed meal at the rate of 800 to 1,000 pounds an acre in the furrow left on each side of the row. Then split out the middles, throwing the earth closely around the plants, but not on them, or they will be smothered.

Whenever practicable—though with a large acreage it is not usually practicable—it pays to burn off the field or bed before barring off. To do this mow the foliage of the plants as closely as possible. Then loosen up the straw used as a mulch and on a dry, breezy day, after the mown foliage has got dry, set fire to the field along the border to windward. If there is a fair quantity of foliage or mulch the field will

burn quickly over, leaving the soil as clean as a floor. Weeds, seed and any insect pest that may chance to be present will meet their judgment day, and to a novice the strawberry plants will seem to have done so, too. But seeming will be all.

In a week, or earlier if it rains, in the fire-blackened, Sahara-like field a magic transformation will take place. Every strawberry plant will have put forth leaves of the most vivid and beautiful growth. The rows can then be barred off, chopped out, fertilized and treated just as above directed.

Subsequent cultivation should be the same as for young fields—shallow ploughing with a small-tooth cultivator and shallow hoeing frequent enough to kill all grass and weeds before they come and to keep the crust on the soil broken. This is all important, as in a dry time it greatly lessens evaporation and minimizes the effect of drought.

Kittrell, N. C.

O. W. BLACKNAIL.

HORSE APPLE.

Editor Southern Planter:

Replying to J. F. Hunter's query in your May issue, "Will Horse Apples Come True from Seed," will say that there is no certainty of their doing so—they may and may not. Even if they should it would be a slow way of getting fruit from them. He had better send some buds from his horse apple tree to a nurseryman and have him bud them on entire root seedlings.

We notice also in the May issue Mr. W. F. Massey's advice as to the best privet for hedges. Our experience with the different kinds of privet is that the ordinary California privet (*Sigustonne Oalifolium*) is more desirable than the Amoor privet and withstands the cold of this climate better, though we think the latter is all right for the more Southern States.

A. W. WALLIS,

Franklin Davis Nursery Company.

Baltimore, Md.

BETTER TOBACCO CAN BE GROWN.

Secretary Wilson, of the United States Department of Agriculture, who recently visited the tobacco raising districts in a number of the Southern States, has made an important announcement. As a result of a soil analysis, the department has found that the soil in parts of Texas, Alabama and South Carolina

is identical with that of Cuba and other countries which grow the very best qualities of the aromatic cigar tobaccos. The department is satisfied that the same soil exists in Mississippi, Louisiana and Florida.

If the results sustain the department's belief, the importance of the discovery cannot be overestimated. About \$10,000,000 worth of leaf tobacco was imported from Cuba last year, and more will be imported this season. The department states that the Southern growers can raise a crop of high-class tobacco as easily as the cheaper grades, which means they would obtain a large increase in their returns.

A VIRGINIA FARMER ON VIRGINIA FARMERS.

Editor Southern Planter:

I always read the SOUTHERN PLANTER with great pleasure, and I find it a very valuable agricultural paper, especially in its horticultural notes. I love to see things grow well, properly and successfully in the garden and field. Our Virginia farmers in general know so little about farming. Now, I assert this with a full knowledge of their obsolete methods. I have farmed all my life. I owned and cultivated at one time (I am 63 years old) 1,200 acres of land. I still have lots to learn, but flatter myself, however, that I am gathering agricultural knowledge from experience and close study of articles in the SOUTHERN PLANTER, *Practical Farmer*, and *Green's Fruit Grower*. Our farmers don't study farming—they rely too much on what their daddies did. They don't read the PLANTER and other farm books. I have just finished saving my crimson clover hay. The weather was as propitious as could have been desired. I made a fine yield, only a small acreage, but at the rate of 4,000 pounds per acre. It was beautiful to behold. I cut it early, just in full bloom. By the way, I am the pioneer in crimson clover in this county (Franklin), introduced it about four years ago. Don't you know there are but a handful of farmers in this county who ever saw it, and many who never heard of it. I shall fallow the clover land at once, apply acid phosphate, plant in corn, and at the last plowing in August, resow in crimson clover. Just think of it? My crop of hay is cut, cured and housed at least three weeks in advance of other hay crops. Oh, what delicious strawberries I am eating! My peas are ready for the table. Loudon, Cuthbert and black raspberries are gloriously progressing. No bugs this year. Potatoes are happy. G. W. B. HALE.
Franklin Co., Va.

Live Stock and Dairy.

HOG CHOLERA.

We regret to say that we have reports of serious outbreaks of hog cholera in Southern Virginia. Many farmers have lost all their hogs and one subscriber writes us that out of forty he has only seventeen left. We are begged to give some advice as to the best means of checking and preventing the disease. We regret to say that we are able to do very little in the way of help. Notwithstanding the fact that the Bureau of Animal Industry of the Department of Agriculture at Washington has been working on this subject for years, Dr. Salmon is able as yet to give only partial endorsement of any of the various remedies tested. The most hopeful seems to be that of inoculation with an anti-toxin serum and there is still considerable difficulty experienced in the preparation and use of this remedy. In the report of the Bureau for 1897 Dr. Salmon says: "There are but two methods of control which, from our present knowledge of the contagious diseases of swine, appear to promise adequate results. One is the old stamping-out method, the slaughter of diseased and exposed animals, the quarantine of infected farms and the disinfection of infected farms and all other places harboring the contagion. The other is the treatment of diseased and exposed animals with anti-toxin serum. * * * The use of anti-toxin serum appears at present to be a much more promising method of diminishing the losses than the stamping-out process. * * * The serum produced by the Bureau in 1897, when used in affected herds, saved over 80 per cent. of the animals. There is no danger connected with the use of the serum, as it is absolutely free from the germs of the disease. It is easily applied and the good effects in sick hogs are seen almost immediately. In reports made in later years down to the last, Dr. Salmon still expresses his confidence in this anti-toxin serum as being the best cure and preventative yet discovered; but there is still considerable uncertainty in results, arising, it is thought, mainly from the difficulty in preparing the serum so as to have it of a uniformly protective and curative character. Experiments are still being continued to endeavor to overcome this difficulty. Apart from the use of this serum, which we should certainly use in any case of the disease, the only other thing to be done is to isolate all sick hogs away from the healthy ones, and to be careful not to allow any one attending the sick ones to go near the healthy ones.

The yards and pens should be disinfected with corrosive sublimate solution and all dead animals be burned and every "turkey buzzard" seen should be shot at once. They carry the disease from farm to farm.

MR. COOPER'S SALE OF JERSEYS.

We are glad to see that at the recent sale of imported Jerseys, held by Mr. T. S. Cooper, southern breeders were amongst the best bidders and buyers of the golden butter-makers. Amongst those who secured some of the choicest stock we find the well-known names of Fillston Farms, Maryland; Biltmore Farms, North Carolina, and Bowmont Farms, Virginia. Fillston Farms secured the finest bull, "Forfarshire," which sold for \$1,750. Mr. Swartout, who represented Fillston, bought nine head at an average of \$425. He also bought the bull Marett's Flying Fox, whose dam was Charley's Niece (a prize daughter of Golden Lad 2d) at a very low figure. Among his females the "plum" was a daughter of Forfarshire—Forfarshire's Perfection, only 23 months old, but a beautiful little cow that gave nine quarts in one milking the day before the sale. Two other daughters of Forfarshire went to Filston Farm, one of them—Forfarshire's Brown Lady—being out of a daughter of Golden's Fern's Lad; besides two elegant daughters of Golden Mon Plaisir. One of these Mon Plaisir cows, Golden Foam, was far advanced in milk and due to calve in August, or she would have brought more money. Her dam is by Golden Lad, and she is, besides being well bred, a show cow all over. Her bull calf by Prince Neddy (son of Golden Lad's Champion) went to Frank H. Shore, Fairmont, W. Vt. The other daughter of Mon Plaisir, Mon Plaisir's Jeanette, has also a magnificent udder with good sized and placed teats. She did not bring so much money simply because one of her teats had an extra opening.

Another elegant cow secured by Filston Farms was Golden Bagatelle, a daughter of Visitor, P. 2140, H. C., and Bagatelle, P. 6564, H. C. (now Golden Lad's Victoria, a daughter of Golden Lad that sold for \$745 in the sale of 1901).

The plum among the cows, Golden Lad's Blue Belle, and her son by Flying Fox, went to Biltmore Farms for \$1,725 and \$580, respectively. They were bought by Professor M. A. Scovell, director of the

Kentucky Experiment Station at Lexington, who had instructions to "buy them" without limit as to price. Golden Lad's Blue Belle is by that ever-popular sire, Golden Lad 2d, and out of Blue Belle, P. 4307, H. C., a prize-winning cow herself, and dam of Cau-mais Lad, who sired the great bulls Financial King and Guenon Lad. But what probably attracted the Biltmore folks most was the fact that she has a daughter in the Biltmore herd, Blue Nun, that made 18 pounds 5½ ounces butter in seven days and won sweepstakes at Ohio State Fair for them, besides other prizes. The son of such a finely bred and great individual cow as is Golden Lad's Blue Belle, should be a sire fit to associate with the great ones already at Biltmore.

The accession of such a family as that of Nun-thorpe's Fontaine to the Jersey stables of America cannot fail to wield a great share of influence in the upward tendency of the breeding industry. Mr. Bowman, of Bowmont Farms, Salem, Va., her buyer, took with her and her granddaughter four other females, the six head costing him an average of \$467. Among them was Flying Fox's Brown Queen, one of the handsomest of the light fawns, that had given nine quarts of milk the night before sale—just a 2-year-old with first calf. He also got Flying Fox's Sweet Daisy and Golden Fern's Mabelle, the latter a 6-year-old gray fawn daughter of Golden Fern's Lad, a first prize winner over the Island, and said to have produced 12 pounds butter (Island weight) in seven days before she had a calf. She is due early next month by Shy Fox.

POLAND CHINA HOGS.

At a recent sale of Poland China hogs at Pekin, Ill., a sow and litter of nine pigs sold for \$2,000, and the whole herd sold for \$13,535.

Such prices as these confirm the Irishman's description of his hog as the "Gintleman that pays the rint."

THE HOG AS A MONEY-MAKER.

The following, taken from Count Life in America, shows what has been done by a g :

Six years ago a daughter of Dr. W. Seward Webb, in order to show her business ability and to obtain a little additional pocket money, took a little "flyer" in stock breeding on Shelburne Farms, Dr. Webb's country seat at Lake Champlain. She invested \$20 in a brood sow, and, with her father's permission,,

made arrangements with his shepherd to care for the sow and the pigs. As there was an abundance of skim milk this was given her without cost, but all grain fed was charged for at market prices. From this single investment she cleared \$90 the first year, \$200 the second and \$300 the third year. By this time the stock had so increased in numbers as to out-grow its quarters, and was proving so profitable that Dr. Webb thought it advisable to buy her out. So at the end of the fourth year he took over the stock at market prices and gave her a check for \$700. From this start the present piggery has been developed, which is the most profitable department of the place. The past year 200 pigs were sold, averaging 250 to 300 pounds in weight and bring one-half cent per pound more than the ruling market prices, because of the superior conditions under which they are kept.

THE BERKSHIRE HOG.

Editor Southern Planter:

I do not say it because I am a breeder of pure-bred Berkshire hogs, but my judgment, guided by the light of experience, is that for the average farmer in the Virginias and Carolinas there is more net profit in raising hogs than any other stock produced on the farm.

Berkshires have been, and are still, considered "mortgage raisers" in many of the Western and Northwestern States, although some persons have the mistaken idea that it is a small breed. As all-round hogs and for general purposes they have no equals. For quality of meat and its flavor, for early maturity, for capacity to take on flesh at any age and size, as well as the ability to make their own living, where others would fair badly, the Berkshires are an ideal hog.

They can be made to weigh, with good treatment, 250 pounds at 6 months of age, while the average farmer is well satisfied to get 200 pounds at the end of fifteen months. Let any of your readers good at arithmetic calculate the cost of the keep and he will have the net profit.

I now have several Berkshire sows, in stock order only, that will weigh between 500 and 600 pounds. I wish I could induce farmers in general to give more attention to hog raising.

It is an indispensable department of mixed husbandry.

S. BROWN ALLEN.

Augusta county, Va.

JAPAN CLOVER AND MILCH COWS.

Editor Southern Planter:

In answer to your North Carolina correspondent in regard to Japan clover fattening cattle and decreasing milk flow, I have to say that I tested Japan clover in 1902 a full season with from seven to ten cows, and my experience and observation is that the fault is in the cow and not the clover. No first-class milch cow will lay on excessive fat on any kind of "ration," but one inclined to beef will grow fat on Japan clover and decrease in milk. My cows had no additional feed and some of them went to the butcher from the pasture. The meal that your subscriber fed his cows only helped the clover to fatten and cut down the milk flow. A cow that will grow fat on a well balanced ration for milk should go to the butcher as soon as the test has been made. It will not pay at any time or under any circumstances, to feed any cow for milk and butter if she persists in putting on beef. Your correspondent can get milk cows that will not get fat on Japan clover or decrease in milk flow from eating it exclusively.

.. .. JOHN M. GIBBS.

Iredell county, N. C.

MONEY IN SHEEP IN EASTERN VIRGINIA.

A. H. Lindsay, an all-round farmer, who has a large farm ten miles south of Norfolk, keeps a flock of 600 to 700 head of sheep, mostly of the Southdown and Shropshire breed, and never feeds them a pound of grain, but allows them to run on tame and wild grass patches during the summer season. Mr. Lindsay raises several hundred acres of wheat and rye, four or five hundred acres of potatoes, and after the rye and wheat are cut and the potatoes dug he plants the land to corn for a second crop, and after he is through cultivating the corn sows therein fall rye in one place and turnips and rutabagas in another and rape still in another. When the summer pastures are short he lets the sheep into the corn-fields thus prepared and changes them about from one field to another, allowing them to feed on these green vegetables and rye until spring, when the sheep come out as fat as butter. The corn is gathered right along while the sheep are feeding in the fields, there being so much feeding in the fields the sheep never disturb the corn. Moreover, the corn stalks are so tall and the ears so high from the ground there is no danger of the sheep getting them: These sheep run anywhere and everywhere through the corn fields until the grass comes in the tame grass pastures in the spring. In this way the foul weeds are kept down and the land

is improved in richness. He arranges his breedings so as to have lambs come from the 1st of October until April, as there is no danger of loss by cold weather during the winter season. October lambs are marketed about March 1st and the balance along later on until July 1st, always bringing the top prices on the market.

Mr. Lindsay sold this last March 100 head of October lambs in one bunch to a dealer in Washington, D. C., at \$5 per head net to him, and it is safe to say they didn't cost 50 cents each to raise them.

This is only what one man can do and what every Virginia farmer *ought to do*, for sheep are a better farm fertilizer than any that was ever manufactured or discovered and beat all commercial fertilizers ever used as a money maker.

Farmers, study this point; you can make money by following this man's example. The sale of the wool from the sheep will twice pay for the keeping, besides selling spring lambs and mutton during the season.—
Cornucopia.

STOCK SALE AT ORANGE, VA.

We can assure readers of the Southern Planter who may attend the sale on the 30th of July at Orange, Va., advertised in this issue, that they will have the opportunity of buying some well-bred stock, seeing a very charming country and attending a well-conducted show of high-class horses, three factors in a very enjoyable outing.

POINTERS ON FEED.

Professor W. J. Kennedy says in New York Farmer:

Alfalfa hay is the best kind of fodder a farmer can feed to his young stock, dairy cows and fattening cattle. It is rich in both protein and ash, and thus balances corn. Clover hay is good.

Bran is an excellent feed, except for young hogs; it is too bulky for them.

The by-products of the glucose factory, such as gluten meal, are exceptionally good feeds to mix with corn.

Cottonseed meal and oil meal serve the same purposes.

Dried blood is the richest food we have in protein. The tankage products are excellent feeds to add to corn for swine feeding.

For calf-feeding purposes flaxseed meal should be added to skimmed milk.

Feeders must feed more protein foods. They must also feed less corn and lighter grain rations.

The Poultry Yard.

NUX VOMICA FOR HAWKS.

Editor Southern Planter:

In your issue for June, 1903, I see under discussion the old question of feeding nux vomica to young fowls to destroy hawks.

When a young man I was a devoted admirer and breeder of game fowls (pit), and I sometimes had as many as fifty "stags" on rural "walks" in the territory covered by Gaston and contiguous counties in North Carolina. Naturally the loss of young birds from hawks was very great in such a thinly populated region as this was in 1878-1879, and I made many unsuccessful efforts to check it before I tried nux vomica. The idea was, I believe, given me by some medical colleague of that county, and it was at once successful. It is true that most of my stags were placed out with negroes so ignorant as to call the drug "ox vomit," but the sum of the testimony was far too great to allow much for the factor of ignorance on the part of my observers. It was the unanimous testimony of all that if a chicken hawk ever fed on a young "Shawl neck" or "War horse" that had been fed on nux vomica *that morning*, the hawk never returned. There is no mystery connected with this result if we consider the following facts:

The evolution of the bird under the life conditions imposed on this earth, as we know it, would bring among the first variations a difference in feeding habits. Some would in the struggle naturally concentrate upon the vegetable seeds and grain foods, others would turn to insect life, others more predacious, adapted themselves to freshly killed flesh of other birds or animals, while some, once above such things, would satisfy themselves with putrid flesh.

These things did not all come in a day, and hence the first of the above groups became in time accustomed to, and hence immune to, the influence of any alkaloids or other poisons which might occur in the seeds and grain of *their range*, while even the last named would in time acquire freedom from the ills which others suffer from ingesting the ptomaines and other decomposition products of putrid flesh. In other words, vegetable feeders became tolerant of vegetable poisons, and flesh feeders indifferent to the toxins of flesh, while each is still more or less susceptible to the influence of things unaccustomed.

In using the poison it is best to use the crude drug in place of the active principles, for the reasons set forth below. The nux vomica of the druggist is the powdered seed of a small tree (*strychnos nux vomica*) growing in India, and from this same button or seed the alkaloid strychnine is obtained. The

first is slowly absorbed, while the latter, notwithstanding its relative insolubility among alkaloids, would soon pass into the general circulation and tissues.

The chicken hawk of the South is nine times out of ten Cooper's hawk (*Accipiter cooperi*), and with their genus it is, fortunately for our purpose, the habit of the thief to eviscerate its prey, and bolt the entrails at the first resting place on his toilsome homeward flight. Bring down any of the *Falconidæ* as they reach their nests with prey, and, as a rule, you will find the prey "stripped."

As regards the susceptibility of the guinea fowl mentioned, I know nothing of the facts—a guinea may be killed with strychnine, but as a graminivorous bird he should carry safely enough to kill a hawk. A spring chicken will carry morphine enough to kill the man that eats him entire.

One fact in connection with the guinea is suggestive, however. He is, as the name indicates, from the west coast of Africa, where, as far as I know, the strychnine and brucine bearing Longoniaceæ are unknown, while our fowls, all varieties of the Indian jungle fowl (*Gallus bankiva*), originated on the soil where we find strychnine bearing plants most abundant.

The duck, even in the domestic state, is not strictly graminivorous, and we would expect small doses of any poisonous alkaloid to give him trouble.

(Dr.) P. B. BARRINGER.

University of Virginia.

PRECOCIOUS CHICKENS.

Mrs. Bellwood, of Drewry's Bluff, Va., had a brood of Plymouth Rock chickens hatched on the 25th of January, 1903. One of the pullets of this brood commenced to lay in the first week of May and is still laying. It is not often that one hears of pullets laying when less than four months old, but this particular one actually laid when only a little more than three months of age.

PRESERVING EGGS.

Use one quart water glass and nine quarts water to preserve eggs. Put fresh eggs in a wooden, stone or glass vessel, and cover with this solution. Water glass a year old is all right to use, if the vessel containing it has been kept tightly closed.

The Horse.

HACKNEYS IN VIRGINIA.

Of all Virginia breeders not one has probably ever labored more unselfishly, and that on a large scale, too, to advance the horse interest in the State than the Hon. Henry Fairfax, owner of the noted Oak Hill Farm, near Aldie, Loudoun county, who imported the famous hackney stallion, Matchless, of Londsboro, from England, in 1888, and later sold him to Dr. W. Seward Webb, of Vermont, for \$15,000. Apart from his extensive breeding establishment, Mr. Fairfax has played a prominent part in public life for years past, serving as a member of the State Senate, member of the Constitutional Convention and chairman of its Finance Committee, and is now one of the State Corporation Commission, which is one of the most important offices in the State Government. Breeding horses began at Oak Hill at an earlier date, of course, but the personal selection in England of Matchless by Mr. Fairfax, and his importation of the wonderfully potent stallion, was the master stroke that brought fame and fortune to the farm as the home of fine harness horses. In the beginning neighboring farmers were allowed to breed their mares to Matchless and other stallions at Oak Hill on the most liberal terms, oftentimes no service being charged, but simply an option taken on the foal at weaning time. Then, too, premiums were offered for the get of the Oak Hill sires, all of which encouraged and served likewise to promote an interest that has since grown into an industry of vast benefit to all that section.



Matchless Dane, chestnut horse, 7, by Matchless of Londsboro, dam Lady Fife, by Danegelt, is the stallion now in use at Oak Hill. He has fine size, good looks and impressive action. The farm mares, some twenty in number, were all mated with him this season, while others of real class were received from northern owners. A number of the Oak Hill matrons are trotting bred and these, mated with hackney sires, have produced some great high-acting harness horses. The grand old imported mare, Go, is a fixture on the farm and well she may be, because her produce sold from the place, not including a couple of foals that died, have brought the snug sum of \$21,650, among them being the 3-year-old registered hackney Firey Dane, by Danegelt, purchased last fall by Jas. Hobart Moore, of Chicago, for \$10,000. It was the intention of Mr. Fairfax to reserve Firey Dane for the stud. Go was sired by Triffett's Fireaway, and is probably the only daughter of that stallion in America. There were seventeen foals dropped at

Oak Hill this season and among them are some that represent the rirhest hackney strains of blood in this country.



Whalebone, the son of Abdallah Wilkes and Maggie O., by Abdallah, 15, has been well patronized this season, and the list of well bred matrons sent to his court includes Lucania, by Woodbourn Hamletonian, one of the best bred sons of Balmont; Kitsy Blue, by Victor Blue, son of the noted Oakland Barn, 2:09½, and Chautauqua Belle, by Henry Coalter, son of Norfolk, the sire of Miss Nelson, 2:11½. The get of Whalébone all have fine size along with rich color, and are of tractable dispositions.



Peter Paul, the brown colt, by Aloha, dam Eminence, by imp. Kyrle Daly, bred and owned by Robert Bradley, of the Greenway Farm, Wilcox Wharf, Va., is the best two year old that has shown up this season. He has been winning right along in good company since the season opened with the Jockey Club spring meeting at Washington, and is now at Chicago, where he has been a prominent figure at the Harlem and Hawthorne meetings. Susie Christian, by Wyalusing, dam Gift, by imp. Charaxus, is another good two year old in the Bradley stable. Aloha, the thoroughbred son of imp. St. Mungo, got Robert Waddell, the American Derby winner at Chicago in 1901.



At North Bend Farm, which is near Phillis, Mecklenburg county, Va., Mr. Charles A. Birnie, has the California bred trotting stallion Anteneer, 16316, and the good-looking son of Eros and Ante, by Anteco, is doing nicely. Eros and Anteco are both sons of Electioneer, hence Anteneer is inbred to that famous son of Hambeltonian, 10.



Lizzie H., full sister to the great race horse Morello, by Eolus, dam Cerise, by imp. Moccasin, one of the choicest bred mares in the Ellerslie stud of R. J. Hancock & Son, Charlottesville, Va., foaled on June 4th, a brown or black colt by imp. Fatherless, and was bred back to that son of Isonomy. This patrician bred youngster has been christened Ian.



Eon, by Eolus, out of famous War Song, by War Dance, heads the Ellerslie Stud, and he has a stud companion of rare breeding in imp. Fatherless, the English bred son of Isonomy and Orphan Agnes, by Speculum. The oldest of the get of Fatherless are

only yearlings, but Eon is credited with a number of winners, four of them capturing over \$20,000 in 1902. Ellerslie is the most noted of modern Virginia thoroughbred breeding establishments, and Eon, who was bred there, is one of the grandest looking thoroughbred stallions ever stripped. The full brothers Aurus and Aureus, by Eolus, are also in the stud at Ellerslie. Their dam is Sample, by imp. Rotherhill.



In a match race at the Deep Run Hunt Club mile track, on June 15th, between the pacers Fern, owned by Luther Libby, and Smith O'Brien, the property of J. C. Cheatwood, the former won in straight heats, time 2:19 1-4, 2:18 3-4, 2:22 1-4. Fern is a bay mare by Petoskey, dam Mannie, by Ajax, and Smith O'Brien is a brown gelding by Aparka, dam Ada M., by Corsair. On the same day Senator Little, the brown gelding, by Wilton, dam Ximena Wilkes, by Wilkes Boy, to decide a wager, trotted a mile against time in 2:27 1-2.



The well-known Virginian, Algernon Daingerfield, formerly a contributor to this journal, has been appointed assistant secretary of the Jockey Club, New York. Mr. Daingerfield is a son of Major Foxhall A. Daingerfield, manager of the famous Castleton Stud, Lexington, Ky., and a nephew of the multimillionaire James R. Keene, owner of Castleton. The position to which Mr. Daingerfield has been elected is an important one, and while his title is that of assistant secretary, the duties of the office really devolve on him.



C. A. Pusey, one of the veterans of the trotting turf, who took Lona Guffin, 2:23 1-4, down the Grand Circuit in the early eighties, and since been prominently identified with trotters and pacers, is now quartered at Glen Lea Farm, near the city, and is working the brown gelding Hulman, 2:20, and others for speed. Among other well known horses trained and driven during recent years by Pusey may be mentioned such good ones as Mosul, 2:09 1-4; Rustler, 2:15 1-4; Firewood, 2:17 1-4, and Little Betz, 2:23 1-4.



The Foxhall Farm, Norfolk, Va., has sold to John McGuire, New York, the speedy trotters Baron Wood, 2:15 1-4, by Baron Posey, and Princess Kenton, 2:32 1-4, by Great Stakes, dam Lady Kenton, by Hambeltonian Mambrino. The latter is six years old, and was driven a mile in 2:19 1-4 before the sale.



Bishop Wilmer, the bay colt one year old, bred and owned at Plain Dealing Farm, near Scottsville, Va., is a good-looking youngster, and should make a trot-

ter with age and development. He is a son of Virginia Chief, and Flora Jefferson, by Bay Diamond, son of Mambrino Patchen. The handsomest three year old at Plain Dealing and one of the best looking to be seen at any breeding establishment is Flora Allerton, chestnut filly, 3, by Allerton, dam Flora Jefferson. The filly was bred by C. W. Williams, owner of Allerton.



Norfolk has joined the circuit of Virginia Horse Shows, and will follow Richmond, the dates chosen being October 19th to 23d. The show will be held at the Fair Grounds, and the mammoth steel building there formerly used for exhibition purposes has been secured. The Norfolk show will be held on a large scale, and will prove a great success.



Diomed, winner of the first English Derby in 1780, was brought to Virginia when twenty-two years old, and \$1,000 was paid for the noted son of Florizel and the sister to Juno, daughter of Spectator. The chestnut stallion died in 1808 the property of Colonel Hoopes, when thirty-one years old, and left an imperishable renown. Diomed must have been a horse of unusual vigor, because he had reached the age to vote when brought to this country, yet the voyage of thirty days and tossing about in a sailing vessel did affect his spirits and he landed full of life. The fate, however, of two other winners of this classic event of the English turf was very different, as Blue Gown, winner of the ninetieth Derby, and Kingcraft, hero of the ninety-second, who were purchased by American breeders, both died on the journey over, though they were shipped on a steamship in comparative luxury. The cost of Diomed presents a strong contrast to the \$10,500 and \$150,000, paid respectively by Charles Reed for imp. St. Blaise, and W. B. McDonough for imp. Ormonde. The last named horses are the only other Derby winners that ever landed in this country alive, with the exception of Diomed and St. Giles, yet the son of Florizel proved more valuable than both of them put together, for he sired Sir Archy, the Emperor of American stallions, who, in turn, got Timoleon, and from his sons came the famous Boston, sire of the immortal Lexington. Sir Archy, Timoleon and Boston were all bred in Virginia. BROAD ROCK.



Sale of Ellerslie, Virginia, Yearlings.

The Ellerslie yearlings (20 head) sold at Gravesend, N. Y., on June 12th, for sixteen thousand eight hundred (\$16,800) dollars, an average of eight hundred and forty dollars per head. This shows what Albemarle grit and grass will do. Mr. J. S. Stark's Red Reynard, by imp. Fatherless, dam Miss Rhodie, brought one thousand dollars.

Miscellaneous.

THE ACTION OF POISON ON BIRDS AND ANIMALS.

Editor Southern Planter:

As the nux vomica question is practically settled, I hope I may be pardoned for contributing an additional mite.

The late Judge Pressly, of this State, once published an article in the *Southern Cultivator*, stating that he had used it (nux vomica) with great effect for years. He could not say that it killed the hawks, but that they disappeared and did not return for a long time. He also quoted Mr. M. Pankerin, a distinguished chemist of Charleston, as saying that the poison was only effective upon such of the feathered tribe as came into this world with their eyes closed. This, I note, does not agree with the opinion of any of your correspondents.

Now, as to certain animals being immune from certain poisons, I can state of my own knowledge that a hog cannot be injured by strychnine. Have fed it to them myself, and a good many years since, when the negroes in a certain part of Georgia would not allow the farmers to own a hog, the latter were driven to the expedient of using strychnine, and it is on record that one morning a negro family failed to show up, and examination revealed the fact that they had gone to the next world, and the remainder of the hog was found in the house. The effect is said to last about three weeks, a teaspoonful to one dozen hogs. As the hog in his natural state kills and eats rattlesnakes, he must be proof against other forms of poison. Likewise, arsenic, so fatal to many animals, is a first class tonic for dogs. I have seen living dog skeletons made fat enough in a few weeks to work up into sausages by one dose of arsenic—i. e., a teaspoonful. Have poisoned rabbits with arsenic, and they were eaten by minks without ill-effect. I remember the case of one party using nux vomica on his fowls who found an owl of the heaviest calibre unable to make an attempt to escape, and so continued to live for some time. My idea is that instinct or common sense teaches them to boycott a territory where the diet is not suitable, or they find the natives can "go one better."

SENEX.

Beaufort Co., S. C.

SOME GOOD SOUTHERN RECORDS.

The agriculture of the South, as well as that of the North, can show some good records. Those who have formed their ideas of Southern agriculture from the reports of methods practiced and results obtained by

the average or poorer class of farmers will doubtless be surprised at some of the following records given by the Practical Farmer, in reply to an Ohio writer:

While there is more general good farming in Ohio, it is not the only place where good farming is done. Even in the poor South there are farmers who need not be ashamed of what they are doing. We suppose that even in the "agriculturally prosperous North" a crop of 46 1-2 bushels of wheat per acre would be considered a fine crop over an 80-acre field. And yet this crop was made down in North Carolina on a clover sod by the late Governor Holt. Thirty bushels of wheat per acre from seed sown the middle of December, after a crop of \$50 per acre had been taken from the field the year before, does not look like bad farming. And yet Mr. Dautridge, of Edgecombe county, N. C., did this after getting \$50 worth of cotton per acre from the field. We suppose that 75 bushels of oats per acre would be thought a fine crop even in Ohio, and yet this crop was made in North Carolina, and the man who raised it cut two tons of pea vine hay from the same land after the oats were harvested, and left the land in crimson clover.

In Maryland the late General McKinney was assessed for taxation on one million dollars' worth of real estate made by farming since the war, and Capt. Andrew Woodall, of the same State, has become a millionaire at farming. In Georgia, Mr. Smith, near Athens, gets about \$75,000 a year from his crops and is a millionaire. How many more millionaire farmers are there in Ohio? In Eastern North Carolina we have seen a field from which over 75 barrels of Irish potatoes per acre were shipped North in early June, a crop of pea vine hay grown on the same land by August, and then a crop of late potatoes of 65 barrels per acre dug from the same land in December and the land set in cabbage for the next spring. And these 1,500 barrels of second crop potatoes were all sold for seed to the "agriculturally prosperous North" before Christmas at \$2.50 per barrel, the field showing a yield of nearly \$400 for the season per acre. Can you do that in Ohio, or anywhere else in the "agriculturally prosperous North?"

We suppose that it would be considered a great wonder if a man got \$3,000 an acre from land in Ohio between December and April, and yet the lettuce growers of Eastern North Carolina have been doing that for some time at a cost of about \$500 per acre. If a man in Ohio got \$900 for 30 crates of strawberries it would be heralded in the agricultural papers of that State. And yet last December this was done in Eastern North Carolina from the open field. Our Ohio friend is justly proud of his apple orchard. But if he had attended the State Fair of North Caro-

lina last fall he would have seen apples he has never yet seen. The judges at the fair on fruits were Prof. H. L. Bailey, of Cornell; Colonel Brackett, of the Agricultural Department, and F. W. Taylor, of the St. Louis Fair. They said that they had never seen such a display of apples, and Colonel Brackett said that such fruit grows only in North Carolina and on the Ozarks, and that North Carolina has the advantage in the exuberant fertility of her mountain lands over the thin lands on the Ozarks.

Ohio has fine grass and fine cattle. But out in the plateau region of North Carolina, where the whole land is in grass and the cattle are Shorthorns, we saw men shipping feeders at 4 1-2 cents, live weight, to Ohio, Indiana and Illinois. In Cherokee county we saw 200 big haystacks in one field on land underlaid with the finest of marble. Our friend thinks that the South cannot grow grass. The fact is, that the cotton farmers have been for generations hard at work to keep the grass down. They have neglected forage and stock too much, but are gradually waking up to their possibilities. We saw a man in Eastern North Carolina mowing over two tons of fine hay per acre from land that was in cotton the year before, and not a grass seed had been sown on the land. Can you cut such a grass crop in Ohio from land left idle?

At the North Carolina Agricultural Experiment Station there is a large lawn of Kentucky blue grass over fifteen years old, which is the admiration of all who see it, even of Ohio men, and we have several of them here. The dense sod springs like a mattress under the foot, and shows that grass will grow here if given half a chance. On the college farm last year a sod was plowed and planted in corn. It promised to make 75 bushels per acre, but was cut green and used for soiling, and peas were sown on the land, and these later in the season were soiled off, and land sown in rye and crimson clover, and now the cows are wading in the clover. Ohio land could hardly do much better.

The market gardeners in Eastern North Carolina habitually get two tons of volunteer hay, equal to the best of timothy, on the land from which their early crops of garden peas and snap beans are shipped, and never a seed is sown. They might do better by sowing peas, and some of them do. The South needs more good Ohio farmers, and good farmers from anywhere, to take up the idle lands. The South is "getting there," and while Southern born men greatly admire the farming of the North, they are not willing to admit that all the good farming is done there. With a kind soil and a climate that allows of cropping that can never be imitated in the North, the possibilities of the South are but little understood. The Southern farmers do not think they know it all yet, and I pity the man anywhere who thinks he has nothing to learn, even from the South.

FILLING THE SILO.

Editor Southern Planter:

I have received numerous inquiries recently in regard to my opinion as to the best, as well as the quickest, way to put up ensilage. I am glad to see that the farmers in Virginia and the South generally are at last taking an interest in the silo. There is nothing made on the farm that gives results as quickly as corn put up this way. My object in writing this article is to attempt to save others the trouble, worry and expense in cutting ensilage and filling the silo that I have had to contend with by using different kinds of cutters and elevators. The cutters that deliver the ensilage into the silo by endless chains are a thing of the past. There is so much loss of time, teams idle, men standing around looking, no one at work but the "boss," and he tugging away at set screws, slats, endless chains and various devices that never work smoothly, that it is beyond endurance. I am confident if any one has as much as one hundred tons of ensilage to cut and has already a cutter and carrier of this kind it will pay him to dispose of it and get a "Blower." There is nothing about these machines to get out of order. The silage is blown into the silo through a pipe. There is no need of a stop, from morning until night. It can be put in place in one-fourth of the time it takes to place the elevator cutters, and the cost of the machines is about the same.

T. O. SANDY.

Nottoway Co., Va.

BRIGHT OUTLOOK FOR SOUTHERN FARMING.

"There is no section of the world," said Secretary Wilson, in speaking of his last tour of the South, "which opens such inducements for diversified farming as the Southern section of the United States. I believe that the next few years will see a development greater than has ever taken place in any section of our country, and the keynote of this will be diversified crops, the doing away with the single farm crop, and the feeding of crops on the farm."

Secretary Wilson is a conservative as well as a far-seeing man and a farmer himself, and his words may be taken at their face value. We commend them to our young men.

The brown mare Frances S. Dayton, 2:27 3-4, by Cadmus, Jr., dam the great brood mare Daisy Dayton, dam of Lake Erie, 2:13 1-4, etc., by Rysdyk's Bellfounder, owned by James Cox, Belgravia Farm, Mt. Jackson, Va., foaled on June 1st, a shapely bay filly by Kelly, 2:27, and was bred back to the blood-like, handsome son of Electioneer and famous thoroughbred Esther, the dam of Expressive, 3, 2:12 1-2.



THE FARMER'S DOG.

The true farmer's dog is a Collie. He is, when properly bred and trained, worth a half dozen "hands" in handling sheep and stock generally.

We have seen a shepherd with two dogs "round up" and hold a flock of hundreds of sheep on the wild, unfenced moorlands of the north of England, and then pass them through a small opening between two short lengths of hurdles and count them without the assistance of another man, and all this done by the dogs without harassing or chasing the sheep. The dogs and sheep are on the best terms with each other, all seemingly enjoying the "round up."

We produce herewith a picture of one of the handsomest dogs of this breed in the country, the imported "General French," owned by the Maplemont Stock Farm, whose advertisement will be found in our columns.

GAPES IN CHICKENS.

The following comes from A. F. C., Rossville, Ind.:

"Our little chickens are all dying with the gapes. Please publish a remedy for this trouble."

The technical name for that disease of poultry commonly called the "gapes" is verminous trachei-bronchitis or Syngamosis. It is caused by a small round worm, curiously formed, the male being firmly attached to the female, giving it the appearance of having two heads. This worm—*Syngamus trachealis*—is a member of a family of parasites that develop without the assistance of an intermediate host, although undoubtedly it is often found in angleworms, and eating these worms often starts the disease.

Gapes recur year after year on some farms and never are known on others. Where they appear once they are likely to remain with considerable persistency. Sometimes removing the poultry yards even a short distance causes the disease to disappear.

A plan we have used with perfect success is one that we always hesitate to recommend, for a little mistake might do much damage. We prefer it to anything else we have ever tried and have never yet lost a chick, and there is no need of losing any if proper care is taken. This plan is fumigation with sulphur, and it is accomplished as follows:

In the bottom of an old kettle or similar vessel place some coals or a piece of brick or iron heated

red-hot. Have the chicks in a flat-bottomed basket, covered with a cloth; place on the coals or other heating material in the kettle a little sulphur, when a dense and suffocating smoke will rise. Through this smoke slowly pass the basket containing the chicks, allowing some of the smoke to rise through the spaces in the bottom. Pass the basket through the smoke only once before removing the cloth to allow the chicks to catch their breath, as they will be gaping from inhaling the suffocating fumes. Repeat the operation two or three times and then operate on another lot until all have been fumigated. The fumes of the sulphur kill the worms, which are attached to the inside of the trachea, and incidentally kill any lice that may be on the chicks. The fumes of carbolic acid have been highly recommended as a cure for gapes. Carbolic acid is used the same as sulphur, and is safer, but the chicks must be exposed to the fumes for a longer period than would be the case if sulphur were used. It is necessary to use almost as much care when using carbolic acid as when sulphur is the agent employed in destroying the pest. Some of the poultry supply houses have a little instrument called a gape-worm extractor, which is sold for a few cents.

GALLUS BANKIVA.

Breeders' Gazette.

When corresponding with advertisers, kindly mention the *Southern Planter*.

THE Southern Planter

PUBLISHED BY

THE SOUTHERN PLANTER PUBLISHING COMP'Y.
RICHMOND, VA.

ISSUED ON 1ST OF EACH MONTH.

J. F. JACKSON,

Editor and General Manager.

B. MORGAN SHEPHERD,
BUSINESS MANAGER.

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Rate card furnished on application.

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THE SOUTHERN PLANTER is mailed to subscribers in the United States and Canada at 50c. per annum; all foreign countries and the city of Richmond, 75c.

REMITTANCES should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

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PUBLISHER'S NOTES.

TO ADVERTISERS.

All advertisements and matter pertaining to advertising *must* reach us by the 25th of each month. Please bear this in mind.

WITH THE ADVERTISERS.

Superior Grain Drills are offered the farmers of the South through our columns again this season.

Mr. C. A. Saunders has for sale some finely bred Shropshire Ram and Ewe Lambs.

The Harris Hardware Company has a few Cultivators left, and is selling them at very low prices to avoid carrying them over for another season.

Look up the advertisement of the famous Bickford & Huffman Drill elsewhere in this issue.

Mr. J. H. Ellis is offering some nice Aberdeen-Angus Cattle. Refer to his ad.

Dederick's Hay Press, well known to hundreds of our readers, is offered in another column. This baler is one of the oldest on the market, and is better and cheaper than ever before.

Mr. J. Tabb Janney is offering for sale his splendid herd bull, "Hero of Bunker Hill." This is a splendid specimen of the Angus Breed and a most prepotent sire.

Empire Grain Drills are advertised in an attractive form in another column.

The Ohio Carriage Manufacturing Company makes an attractive offer in this month's advertisement.

Rose Dale Stock Farm is offering Aberdeen-Angus Cattle at "introductory prices." Look up the ad.

Dorset Sheep and Hereford Cattle are offered by H. Armstrong, Lantz Mills, Va.

Tamworth and Poland China Hogs, also Hampshire Down Sheep can be had of Mr. J. C. Graves, Barboursville, Va.

Shorthorn Calves—a couple of nice ones—can be bought of Repass Bros., Wytheville, Va.

The International Stock Food Co. has a large ad elsewhere in this issue. Look it up and send for their free stock book.

Nature's Remedy Company has a card elsewhere in this number.

A LESSON OF THE TIMES.

It is a very neat and attractive hanger in several colors and half-tone effects, handsome enough for home decoration, which the Studebaker Bros. Manufacturing Co. are sending out under the above title. It would be more aptly described as a pictorial history of the rise of a great manufacturing establishment. The upper panel pictures the unpretentious but

Wood's Seeds.

Seed Potatoes for Late Planting.

Our customers say that Wood's Cold Storage Seed Potatoes have solved the problem.

How to secure a bountiful supply of potatoes all through the year. Our special circular about Cold Storage Seed Potatoes gives full information. Write for it.

Sow Cow Peas

To follow your grain crops. They can be satisfactorily seeded all through July. Not necessary to replot grain fields for Cow Peas; run cutaway or sharp-toothed harrow over the fields, and it will give sufficient preparation and make a most satisfactory crop. Write for prices and special circular.

T. W. Wood's & Sons,
SEEDSMEN, - Richmond, Va.

CELERY

Plants—G. S.
B. \$1.40 per
1,000; 80c 500;

Strong healthy plants from French grown seed sown thin (in rows) in rich beds. Plants are kept in even steady growth by irrigation. (12 experiments, covering 3 years, by Maryland Agricultural Experiment Station, Bulletin No 83, with American and French seed, purchased from five leading seed firms, showed that American seed produce about 40 per cent of hollow stalks. French seed no hollow stalks.) W. P., G. H. and G. P. \$1.60 per 1,000; \$1.00, 500, 1,500,000 plants. 1 ship in ventilated boxes, roots in damp moss. F. W. Rochelle, Drawer 7, Chester, N. J.

TURNIP SEED.

Fresh Stock of
All Varieties.

DIGGS & BEADLES,
Seedsman,

1711 E. Franklin St., RICHMOND, VA.

BEEES!

Mr. Farmer: Do you know that a few colonies of good Italian Bees will pay you a better revenue than any investment you can make? And besides are worth many times their cost to pollinize your fruit and vegetation each year.

My pure bred Italians cannot be beaten in Virginia. I am prepared to furnish Bees by the pound, nuclei or colony.

Full Colony pure bred Italians in complete Langstroth Hive including Super and Foundation Starters, \$6.00 f. o. b.

Also A. I. Root's hives and supplies at catalogue prices. Extracted and Comb Honey. Pure Italian Queens \$1.00 each.

Write me anything you wish to know about BEEES or supplies, your correspondence solicited.

J. E. THOMASSON, Bumpass, Va.

Mention the *Southern Planter* in writing.

now famous Studebaker blacksmith shop of 1852—the bud in which was wrapped up the brilliant Studebaker future. For it was this humble shop that by growth, development and enlargement is the logical predecessor of all that the great plant now boasts. Following this is an excellent reproduction of the plant as it now is, with the legends “largest in the world” and “plant covers 101 acres.” Below are tastefully grouped the five Studebaker brothers, whose faces have become so familiar, and from a cornucopia on either side of this group comes all manner of vehicles, typical of the endless stream which flows from the Studebaker factory to all corners of the earth. This hanger, 20x38 inches in size, tinned top and bottom, may be had by writing the Studebaker Bros. Manufacturing Co., South Bend, Ind., and enclosing six cents in stamps to pay postage. It ought to be in every school house in the land.

State of Ohio, City of Toledo,) ss.

Lucas County,)

Frank J. Cheney makes oath that he is the senior partner of the firm of F. J. Cheney & Co., doing business in the city of Toledo, county and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of HALL'S CATARRH CURE.

FRANK J. CHENEY.

Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1886.

A. W. GLEASON,

(Seal) Notary Public.

Hall's Catarrh Cure is taken internally and **acts directly** on the blood and mucous surfaces of the system. Send for testimonials, free.

F. J. CHENEY & CO., Toledo, O.

Sold by Druggists, 75c.

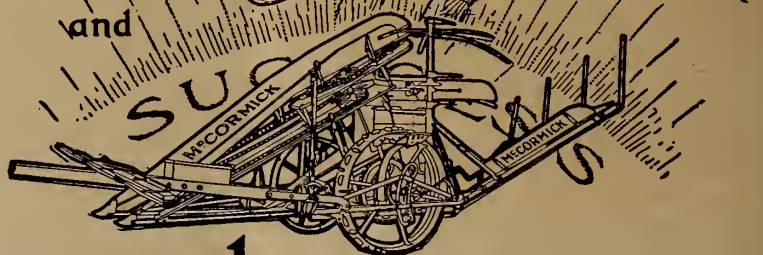
Hall's Family Pills are the best.

A NEW ALMANAC.

The 1904 Almanac to be issued by the America Seeding Machine Co., Springfield, Ohio, will be a most complete and valuable reference book. It will contain a complete Almanac, accurate weather forecasts for each month, valuable cooking and other receipts for the housewife, reliable veterinary receipts, reports of experimental stations, butter, egg, grain and produce account blanks, etc., etc., besides departments devoted to the interests of the young man, young lady, the girl and the boy. This Almanac will have a handsome lithographed cover in colors, and will contain 64 pages of the most useful information. The Almanac will be ready for distribution early in the winter. It will be mailed free to any person who will send their name and address. Requests should be sent at once to Department 89, American Seeding Machine Co., Springfield, Ohio.

Get the
McCORMICK
CORN BINDER

and



reach success

T



HE farmer who reaches success is the one who not only works hard, but who utilizes all of the means within his reach. The McCormick corn binder is within the reach of every man. It will save your corn crop—ears, fodder, stalks and all—and will help double the value of this great crop.

W. K. BACHE, General Agent for
McCormick Machines, Richmond, Va.

Bales Hay, Straw, Moss, Husks, Cotton, Wool.

Results and durability are the features that have made Dederick Baling Presses so famous. Satisfaction *always* follows their purchase. Our catalogue illustrates a variety of styles covering every baling need. You'll know how to buy to best advantage if you get a copy. It is free. Send for it to-day.

Dederick's Full Circle Press

is an all round machine for all baling purposes. Requires 50 per cent less draft than any other full circle press.

P. K. Dederick's Sons, 76 Tivoli St., Albany, N. Y.

PROF. JOHN SPENCER, Veterinarian, Virginia Agricultural Experiment Station, says:

Chloro-Naptholeum Dip

“Insures the Destructions of Mites. Outbreaks which have come under our notice have been thoroughly stamped out by dipping in a 2 per cent solution of Chloro Naptholeum Dip.” If you've tried it you know how good it is, if you haven't, try it now. One Gallon sent prepaid upon receipt of \$1.50, money order or check. Booklet free. It can make money for you. AGENTS WANTED. THE WEST DISINFECTING CO., Inc., 30 East 59th St., New York



For 40 Years

The above U. S. Registered Trade-Mark has been a safeguard to the farmer that he made no mistake in buying

Farmers' Favorite Grain Drills

For 1903 we offer to the Farmer many improvements and new devices of proven merit:

Steel Ribbon Grain Tubes,
New Balanced Angle-Steel Frame,
"Plowlar" Single Disc, Extension Chilled Hub,
"Perfection" Grass Seeder,
Improved Box and Roller Bearings.

Our FREE Grain Drill Literature tells all about it. Write for it to-day.

BICKFORD & HUFFMAN DIVISION
American Seeding Machine Company,
Dept. B. Springfield, Ohio.

Pressing Hard Easy

sounds queer, doesn't it? But it isn't difficult to understand if you are using a



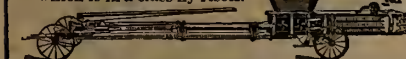
RED RIPPER Hay Press

It bales tight bundles, large or small, and does it with the least amount of strain on the horse. The Red Ripper has been twice entered in competition with other presses, both times at the Georgia state fair, where it was awarded first premium. Dealers who handle the Red Ripper say that it just drives other hay presses out of the market. The lowest priced press on the market, and costs less than others to operate. Progressive, economical farmers will want to know more and can by sending for our new Catalog No. 433. Distributing points, Baltimore, Memphis, Cincinnati.

Address **SIKES MFG. CO., Helena, Georgia.**

The Hay Baler

which is in a class by itself.



"ELI" PRESSES bale fastest and best for shipping and market. Largest Feed Openings. horse and steam power, 33 styles and sizes. Many featured machines, standard of the world. Get the free Eli catalogue.
Collins Plow Co., 1185 Hampshire St., Quincy, Ill.

ATTAINING SUCCESS.

Success affords us the means of securing additional success, as the possession of capital enables us to increase our pecuniary gains.—Stanislaus.

Every one likes to succeed, no matter what the undertaking may be. The merchant strives to build up a large business, the scholar seeks to perfect himself in his studies, and the farmer is tireless in his efforts to increase the yield of his crops. Some succeed in their efforts, while others fail to attain success. Washington, Lincoln and Grant are splendid examples of what properly directed effort will accomplish, even though one is compelled to overcome seemingly insurmountable obstacles. Success on the farm to-day is secured largely by the proper selection and use of machines. It is impossible to save all of the corn crop without using machines, and the McCormick corn machines enable the corn grower to double the value of his crop. They are the machines to buy if you wish to attain success.

To supply a sufficiency of available nitrogen is the husbandman's most difficult, yet most necessary task. To furnish his animals with an adequate supply of digestible protein (nitrogenous ingredient) in their rations is equally perplexing to the feeder of live stock. Without a sufficiency of nitrogen, plants fail to acquire their full development and return ample profits in grain or other products. In a similar way animals cannot fully develop a strong muscular frame, perfect bones and tendons, or the vim and vigor of robust constitutions, in the absence of a sufficiency of protein. Corn lacks this principle. Oats and other cereals give us but some 11 to 14 per cent., while wheat bran is not much richer than the grains in protein. Dried blood meal, manufactured by the Armour Fertilizer Works, and advertised elsewhere in this issue, shows an analysis of 37 per cent. of digestible protein, hence should at once command the attention of stock feeders. It has been fully tried as a food, is economical, prevents many diseases, and comes in a handy form for use. It will also keep poultry healthy, and make hens lay. Address the above firm for their booklet, giving full particulars.

GENERAL CONUNDRUMS.

When is a kiss like a rumor? When it goes from mouth to mouth.

Why is the horse the most curious feeder in the world? He eats best without a bit in his mouth.

Why is your nose in the middle of your face? It is the scenter.

What is the latest thing in dresses? Night dresses.

Why do chimneys smoke? Because they cannot chew.

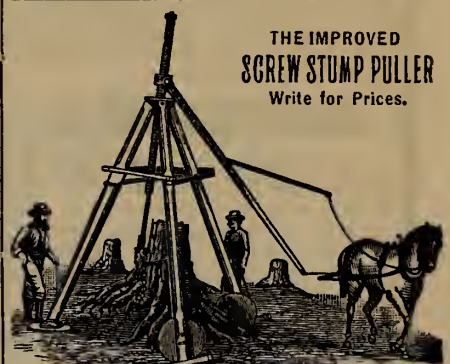
When is a ship most happy? When she rests on the bosom of a swell.

Wise Man's Wagon.

The man who has had experience in running a wagon knows that it is the wheels that determine the life of the wagon itself. Our **ELECTRIC STEEL WHEELS** have given a new lease of life to thousands of old wagons. They can be had in any desired height and any width of tire up to 8 inches. With a set of these wheels you can in a few minutes have either a high or a low down wagon. The Electric Handy Wagon is made by skilled workmen, of best selected material—white hickory axles, steel wheels, steel hounds, etc. Guaranteed to carry 4000 lbs. Here is the wagon that will save money for you, as it lasts almost forever. Our catalog describing the uses of these wheels and wagons sent free. Write for it. **ELECTRIC WHEEL CO., BOX 146 QUINCY, ILLINOIS.**

ELECTRIC

WE'LL PAY THE FREIGHT
and send 4 Buggy Wheels, Steel Tire on, - \$7.25
With Rubber Tires, \$15.00. 1 mfg. wheels 2 1/2 to 4 in. tread. Top Buggies, \$28.75; Harness, \$3.50. Write for catalogue. Learn how to buy vehicles and parts direct. Wagon Umbrella FREE. **W. V. BOOB, Cincinnati, O.**

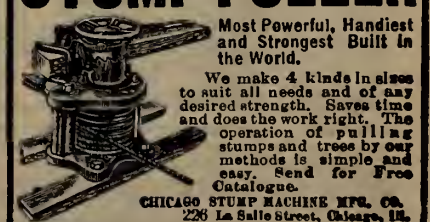


THE IMPROVED SCREW STUMP PULLER

Write for Prices.

Chamberlin Mfg. Co., Olean, N. Y., U. S. A.

STUMP PULLER



Most Powerful, Handiest and Strongest Built in the World.

We make 4 kinds in sizes to suit all needs and of any desired strength. Saves time and does the work right. The operation of pulling stumps and trees by our method is simple and easy. Send for Free Catalogue.

CHICAGO STUMP MACHINE MFG. CO.
226 La Salle Street, Chicago, Ill.

HERCULES STUMP PULLER



Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made.

Hercules Mfg. Co., 413 17th St., Centerville, Iowa.

A NEW ADVERTISER.

We invite attention to the advertisement of J. S. Moore's Sons, elsewhere in this issue. This firm succeeds Mr. D. O'Sullivan in the grocery business at Eighteenth and Main streets, Richmond, Va. The old store house is being renovated and remodelled and restocked with everything in the grocery line. As Mr. O'Sullivan sold the good will of his business also, the new firm is expecting his old customers to favor it with a share of their patronage. Best groceries, prompt attention and lowest prices in the city are the grounds upon which the trade of our customers is solicited.

ELI HAY BAILERS.

Hay balers on a large scale will be interested in the Eli Power Presses, which are advertised elsewhere, by the manufacturer, the Collins Plow Company, Quincy, Ill. All told, this company manufactures near two-score of presses, including about everything that could possibly be desired in pattern and size. The power "Elis" are distinguished by numerous specially valuable features, such as being self-feeding, automatic condensing hoppers, automatic block placers, signal bells for regulating size of bales, etc. These presses are made in both wood and steel cases. They have a record of three bales a minute, which, considering the shapely and solid, compact character of the bale, ought to meet the requirements of the most exacting buyer. The Eli press is past the experimental stage. It has established a most enviable character by long service in the field. Most of our readers are acquainted with it. Such as are not and are thinking of buying should not think of placing an order until they have procured the catalogue and made a study of its claims. Consult the ad. and write for catalogue. It is mailed free.

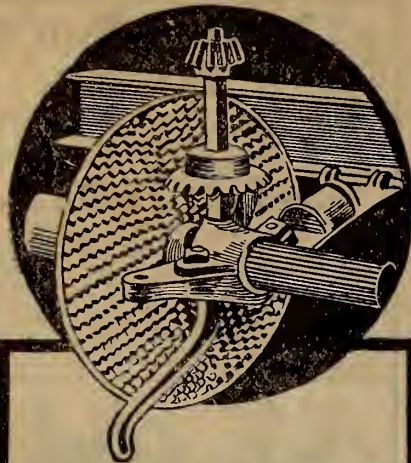
HIS REASON.

It has been said of the southern dandy that he has not always a clear idea as to property rights, but on some points it appears that he is not in the least hazy.

An old colored man in the days "befo' de wah" was given one of his master's cast-off hats, which he wore with great pride. One Sunday his master met him coming home from a camp-meeting in a pouring rain, bare-headed and holding his hat under his coat. Later on the master questioned him jocosely, "Why didn't you wear your hat, Jerry? Did you feel the need of cooling your head?"

"You see it am laik dis, sah," responded Jerry. "Mah head am yours, but mah hat am mine, an' nachelly I feels laik takin' care ob it, sah."—*Youth's Companion.*

Mention the *Southern Planter* in writing.



ONLY ONE

more feature demonstrating the unquestioned merit of Superior Seeding Machines. The above illustration shows the Superior Disk Wheel with Sliding Pinion. It consists practically of 13 wheels of different sizes cast upon a solid plate. With it 13 different quantities can be sown from each side of the distributor wheel. This dispenses with all loose wheels and all side draft. There are no removable gears to get lost and cause annoyance. Change of quantity by change of speed. Our new catalogue No 14 which is free, tells all about this and other Superior devices. Write for it today.

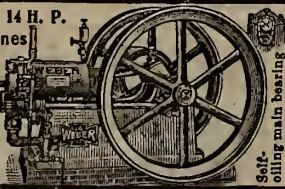
SUPERIOR

Seeding Machines will do more and better work than any other drill. Will not choke in trash. Built solid and strong of the best materials. One man or boy can do perfect seeding in any field under all conditions. Superior Seeding Machines are guaranteed, and the guarantee is good.

SUPERIOR DIVISION,
AMERICAN SEEDING MACHINE CO.,
SPRINGFIELD, OHIO.

The WEBER 14 H. P.

Gasoline Engines for running grinders, shredders, cutters, threshers, etc. Free catalogue gives all sizes. Weber Gas & Gasoline Engine Co., Box 12, Kansas City, Mo.



Self-rolling main bearing

RIFF HYDRAULIC ENGINE

WATER RAISING

by water power is the sure, economical way. A constant stream for irrigation, stock or household use. **PUMPS TO ANY HEIGHT.** No attention. The thing for the country home. Sold on 30 days trial. Write for free catalogue. RIFE ENGINE CO., 126 Liberty St. New York.



STEAM MERRY-GO-ROUND

for sale; Price \$800.00, is in good shape and anyone with a little push can make it pay 6 per cent. on \$30,000. Satisfactory reasons for selling.

J. W. & T. H. MASSEY, Hampton, Va.

"THE INVINCIBLE"

POTATO PLANTER.

is the most practical and successful hand potato planter made. Will not clog, but under all conditions does perfect work. Only planter made with open wire sleeve. A boy can plant from four to six acres a day with an Invincible Planter. Strongly made. Handles unbreakable and adjustable.

Read these unsolicited letters:

Gentlemen,—I am very highly pleased with the Invincible Potato Planter. Would not take \$10 if I could not get another. Not every farmer can afford to buy a \$100 two-horse planter to use only for a day or two and stand idle the rest of the year.

L. H. SNOW,
Phoenixville, Conn.

Read this:

Gentlemen,—I bought one of your Invincible Potato Planters as a trial sample last year and think it equal to an extra man, besides being a good back saver.

C. W. GRIGGS,
Rose Valley, Pa.

Reliable Agents Wanted.

Any farmer can sell Invincible Planters on sight. Write for terms.

Circulars Free.
H. H. WABERS MFG. Co.,
Racine, Wis.



SEPARATORS AND POWERS.

For 1, 2 and 3 horses, with governor; level or even tread. Catalogue free.



Sweep powers, Corn Shellers, Feed Mills, Steel Rollers, Mowers, Rakes, Cultivators, Saws, Engines—3 to 25 H.P., mounted or stationary. The Messenger Mfg. Co., Tatamy, Pa.

WELL DRILLING MACHINES

The most successful money-making machines ever made. Also machines for boring wells with augers by horse power. Write us if you mean business.

Loomis Machine Co., Tiffin, Ohio.

SEPARATOR

FOR SALE OR EXCHANGE

A De Laval Humming Bird Separator, in perfect condition, used about 20 times; will sell cheap for cash or will exchange for a pure-bred Bull Calf of any Beef Breed—Polled preferred.

W. H. MacNAIR, Tarboro, N. C.

CULTIVATORS BELOW COST!

Roofing Materials.—Tin plate, iron roofing, paper roofing, nails, hardware. Carriage and wagon materials. Cook stoves etc. Don't write us unless you want the best at the Lowest Price.

HARRIS HARDWARE CO., 409 E. Broad, Richmond, Va.

ROUND SILO
THE PHILADELPHIA.

The only Perfect Continuous Open Front SILO made. See Open-Top Patent Roof. Ask for Catalogue.

E. F. SCHLICHTER,
321 Vine St., Philadelphia, Pa.
Also made in the West by Duplex Mfg. Co., South Superior, Wis.



WIRE FENCE.

Heavy lateral wires, heavy hard steel stays, coiled spring wire, Sure Grip lock. In strength, appearance and durability, the Hard Steel cannot be excelled. Write for catalogue and prices.

THE HARD STEEL WIRE FENCE CO.,
Cuyahoga Falls, Ohio.

MANLOVE SELF OPENING GATE



The only machine that will pay for itself without help, or save your frisky horse or wife from a runaway.

Catalogue free.
MANLOVE GATE CO.,
272 HURON ST. CHICAGO, ILL.

Genuine Spiral Spring Wire FENCES AND GATES

If your dealer does not have our goods in stock you can buy direct at Manufacturers' Price. Write for Catalogue and secure agency.

INTERNATIONAL FENCE AND F. CO.
Columbus, Ohio.

PAGE

PAGE 12-BAR, 58-INCH FENCE

comes pretty near being the perfect farm fence.
PAGE WOVEN WIRE FENCE CO., Adrian, Mich.



LAWN FENCE

Many designs. Cheap as wood. 32 page Catalogue free. Special Prices to Cemeteries and Churches. Address COILED SPRING FENCE CO. Box Q. Winchester, Ind.

FENCE! STRONGEST MADE.

Built strong. Chicken tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalogue Free COILED SPRING FENCE CO. Box 53 Winchester, Indiana, U. S. A.

FOR SALE. A McCORMICK IMPROVED Corn Harvester

It is in perfect condition and does fine work. W. E. THOMAS, Nassawadox, Va.

NO HUMBUG. Three in One.

Swine V. Stock Marker and Calf Dohomer. Stops swine from rooting. Makes 48 different ear marks. Extracut Horns. Price \$1.50. Send \$1 for trial. 1716 suits, send balance. Pat'd May 6, 1902. Hog and Calf Holder only 75c. FARMER BRIGHTON, FAIRFIELD, IOWA.



FREE from anxiety over wash day are those who use a DILLEY QUEEN WASHER. We manufacture three styles of washers; to introduce them we will give you the advantage of our factory prices for a short time. Write for catalogue and prices. Our Up-to-Date at \$2.50.



LYONS WASHING MACHINE CO., Lyons, Mich.

HIGHEST PRICES FOR BALED HAY.

The prices obtained for baled hay are largely influenced by its appearance. Uniformity of sections, evenness and squareness of ends, command both better sales and better prices than poorly baled hay. To get the best prices means the production of the best appearing bales, and in this respect the work done by the Dederick baling presses, manufactured by the P. K. Dederick's Sons, Albany, N. Y., places these machines in the lead. Every farmer interested in the baling of hay or straw should send to this firm for their latest catalogue. It is instructive and contains descriptions of baling machines in various sizes and styles for every baling need.

FOR AN IDLE MOMENT.

He kissed her back.—*Atlanta Constitution*. She fainted upon his departure.—*Lynn Union*. She seated herself upon his entering.—*Albia Democrat*. She whipped him upon his return.—*Burlington Hawkeye*. How about the woman who was hurt in the fracas?—*Railway Age*. He kicked the tramp while she sitting down.—*American Pharmacist*. We thought she sat down upon being asked.—*Saturday Gossip*. He kissed her passionately upon her reappearance.—*Jefferson Souvenir*. A Chicago foot pad was shot in the tunnel.—*Western Medical Reporter*. We feel sorry for the poor woman who was shot in the oil regions.—*Medical World*. And why not drop a tear for the man who was fatally stabbed in the rotunda, and for him who was kicked on the highway?—*Medical Age*. How about the fellow that was shot in the tenderloin district?—*Rockwell Phonograph*. Please shed a few tears for the Ruthven girl who was hit on the front porch.—*Ruthven (la.) Appeal*.

CHLORO NAPHTHOLEUM.

This well-known Dip has received very strong endorsement recently at the hands of Dr. G. T. Seabury, State Veterinarian of Wyoming. He has issued a proclamation to the stockmen of that State, that all stock affected with Texas Itch, Spanish Itch, Range Itch, Mange or Lice must be dipped, and says that Chloro Naphtholeum is the best possible remedy to obtain, and strongly urges its use.

The West Disinfecting Co., manufacturers, of New York, no doubt feel proud of this strong endorsement, and very justly so.

Chloro Naphtholeum is advertised elsewhere in this issue.

Why is a kiss like a sermon? It requires two heads, and an application. When was Shakespeare a broker? When he furnished stock quotations. Why don't Sweden have to send abroad for cattle? Because she keeps her Stock-holm.

The Editor

of this paper would not publish this advertisement if it did not know the Ohio Carriage Mfg. Co. to be perfectly responsible, and that they would make good every claim they make for the celebrated

Split Hickory Vehicles

Sold on 30 Days Free Trial and covered with iron-clad guarantee for 2 years. This is our Celebrated

Split Hickory Special

which has 100 points of merit,



sold direct from factory to user for \$47.50. The price is just high enough to ensure a good job, and at least \$25 below what a dealer would ask for a similar job—not a Split Hickory one. REMEMBER we manufacture only SPLIT HICKORY VEHICLES. Write at once for FREE Catalogue.

OHIO CARRIAGE MFG. CO., Station 41, Cincinnati, Ohio.

30 YEARS SELLING DIRECT

Vehicles and Harness direct to consumer at factory cost plus one profit only. Large Catalogue Free.

ELKHART CARRIAGE AND HARNESS MFG. CO., Elkhart, Ind.

FRAZER

Axle Grease

Best in the world. Its wearing qualities are unsurpassed, actually outlasting 3 bxs. any other brand. Not affected by heat. Get the Genuine. FOR SALE BY ALL DEALERS.

SAN JOSE SCALE and other insects can be controlled by using

GOOD'S CAUSTIC POTASH WHALE OIL SOAP. No. 3.

It also prevents Curd Leaf. Endorsed by entomologists. This soap is a fertilizer as well as insecticide. 50 lb. kegs, \$2.50; 100 lb. kegs, \$4.50. Half barrels, 270 lbs., at 3 1/2 c. per lb.; barrels, 425 lbs., at 3 1/4 c. Large quantities, special rates, Send for circular.

939—41 N. Front St.,

JAMES GOOD, PHILADELPHIA, PA.



Nearly 2 score years we have been training men and women for business. Only Business College in Va., and second in South to own its building. No vacation. Catalogue free. Bookkeeping, Shorthand, Penmanship by mail.

Smithdeal President.

"Leading bus. col. south Potomac river."—Phila. Stenographer.

MARK YOUR STOCK.

KENTUCKY ALUMINUM EAR LABEL

Made by F. H. JACKSON & Co., Winchester, Ky. Write to them for free samples.

GRAIN and FERTILIZER DRILL

The YORK FORCE FEED DRILL combines lightness with strength. Most complete drill made. No complex gearing to get out of order. Boxes are close to ground. Fully Guaranteed.

Easily regulates quantity of seed or fertilizer, and sows with regularity.

Weight, Only 700 lbs.

Agents Wanted. Write for Catalogue.

THE HENCH & DROMGOLD CO.,
Mfrs., York, Pa.

FREE SAMPLE

OF "THE STORY OF MY LIFE AND WORK," By Booker T. Washington.



Send us your name and address. We want you to have a copy of this autobiography of the greatest living Negro for the purpose of introducing it in your community. It is a remarkable seller, big profit; agents are making from \$4 to \$10 per day. Will you introduce it by selling or getting us an agent? If so, send at once for a sample.

J. L. NICHOLS & CO.,
Atlanta, Ga.

Selling Price \$1.00. 915 Austell Building.

HOMES AND THE PLACE TO FIND THEM.

No place in the United States can a man do so well at farming, for the money invested, as in Virginia. Lands are cheap; climate good, and the best of markets close at hand. It is the State of all others, for a comfortable all the year round home. The James River Valley Colonization and Improvement Company offer superior advantages to land purchasers. For free 36 page land pamphlet, address

W. A. PARSONS, Vinita, Va.
C & O Main St. Depot Richmond, Va.

To HOMESEEEKERS.

"THE BUSINESS OF FARMING IN VIRGINIA."

Is the title of a new pamphlet issued by the Norfolk and Western Railway Company. We will gladly mail you a copy.

W. B. BEVILL, PAUL SCHERER, Agt.,
G. P. A., Lands and Immigration,
Roanoke, Va.

WE HAVE A LARGE LIST OF FRUIT, POULTRY and TRUCK FARMS

Ten, Fifty and One Hundred Acres each, with good buildings, close to steam and trolley lines, easy access to the city. Also

GRAIN AND STOCK FARMS

From 100 to 1,000 acres at low prices all the way from \$5 to \$50 per acre. Write for Catalogue.

THE VIRGINIA LAND AGENCY, Richmond, Va.
J. R. HOCKADAY, Manager.

EMILY'S CHARGE.

(A Serial Tale by Mary Washington.)
CHAPTER I.

"Extraordinary!" exclaimed Mrs. Brown.

"Preposterous!" said Mrs. Smith.

"Absurd!" chimed in a third lady.

"Quixotic!" exclaimed a fourth.

All these comments were uttered over the tea table of Mrs. Brown, and the subject of them was a young girl in the neighborhood, Emily Henningham, an orphan left in charge of a young sister and brother. What they criticized in her was the fact that she had declined what they termed "highly advantageous offers" to adopt her brother and sister, declaring her resolution to keep them with her, and, if possible, rear and support them herself. She was a girl of nineteen, whose mother had recently died, leaving in her charge a sister of twelve and little brother of ten. Her father had died soon after the war, leaving his family much straitened, but Mrs. Henningham's right of dower had enabled her to retain a home for herself and children during her lifetime. Col. Henningham had been deeply involved in debt. Owing to the fatal credit system so commonly practiced in Virginia before the war, he had allowed himself to fall into debt almost before he knew it. He might have extricated himself without difficulty then, but his creditors did not press for a settlement nor indeed care for one, as they were getting a good interest on the claim, and his property seemed an ample security for its final settlement, but when the day of reckoning came after the war, it swept all he had except what the creditors allowed Mrs. Henningham for her contingent right of dower.

Mrs. Henningham's health had long been delicate, but after her husband's death she became increasingly frail, so that the care of the younger children devolved more and more on Emily, who loved them with the double love of mother and sister, an affection which they, on their part, returned warmly. The little girl, Alice, was very sprightly and strikingly pretty. The boy, Walter, was a bright, impressive child, warm hearted and generous, but of an easy, impressionable temperament, that made him peculiarly susceptible to any strong influences, either good or bad, that were brought to bear on him. This latter trait his mother noted in fear and trembling, and as she found her health declining, this subject occasioned her more anxiety than any other. "I wish, dear Emily," she said, "that you could keep your brother and sister with you, especially the former. You understand his disposition and temperament so well, and would strive as earnestly as I would to guard against and counteract his weak points. But I do not see how this can be, and therefore I will hamper you with no promise, and scarcely feel regret to hamper you even by expressing this wish. I ear-

IF YOU WISH TO SELL—OR BUY—VIRGINIA LANDS

Communicate with us. Write for free "Virginia Real Estate Journal," containing many splendid bargains.

R. B. CHAFFIN & CO., Inc.,
No. 1 N 10th St., Richmond, Va.

VIRGINIA FARMS

\$3 PER ACRE AND UPWARDS.
EASY PAYMENTS. CATALOGUE FREE.
GEO. E. CRAWFORD & CO., Richmond, Va.
Established 1875.

"PIEDMONT" And all that it Implies."

Good land, climate, markets, shipping facilities, churches, schools, good health, moderate prices, easy terms.

MACON & CO., - Orange, Va.

FINE FARMS in the great fruit grain and stock section of VIRGINIA. Best climate and water in the U. S. Near great markets, with best educational advantages. For further information, address
ALBEMARLE IMMIGRATION CO.,
SAM'L B. WOODS, Pres. Charlottesville, Va.

VIRGINIA FARMS

All prices and sizes. Free list on application.
WM. B. PIZZINI CO., RICHMOND, VA.

Go South.

For full particulars write
A. JEFFERS,
Norfolk, Va.

SOUTHWESTERN VIRGINIA
BLUE GRASS FARMS and MINERAL LANDS.
Send for Free Real Estate Bulletin.
Southwestern Va. Land Agency, Wytheville, Va.

WANTED, By a practical Pennsylvania farmer, to rent or manage a good Virginia farm. Best reference. address "FARMER," Williamsport, Pa.

WANTED

POSITION by Practical Poultry man to plan and build a duck and poultry plant for market, for a man having location and capital. None other need answer. Salary expected until business is established. No. 1. references given and same required. Address
C. F. G.,
Care Southern Planter.

WANTED—A WHITE FAMILY TO WORK for wages in the country; woman to cook; another to work in house and dairy (fuel and water right at hand) and a man or boy care for driving horses, work in garden, etc. All at the same home. Address,
WALTER RANDOLPH CRABBE,
Hague, Westmoreland Co., Va.

RUPTURE CURED while you work. You pay \$4 when cured. No cure, no pay. ALEX. SPEIRS, Box 844. Westbrook, Maine.

FARMS FOR SALE!

Farm No. 2.
Contains 265 acres; 215 under cultivation; 50 acres original oak and hickory. Fronts on the pike running from Winchester to Alexandria; five miles from railroad; one-half mile from proposed electric railroad. Excellent six-room dwelling house, with broad halls, standing in a large, nicely-shaded blue-grass lawn; all necessary outbuildings; land chocolate clay, with stiff clay subsoil; all level, but rolling enough to drain well; fine for wheat and grass; well watered. Owner contemplates making improvements. But if sold before, price \$25 per acre, on easy terms.

No. 3.
Contains 430 acres; 350 acres under cultivation; 80 acres in good original oak and hickory timber. Situated in Loudoun county, four miles from railroad station; one mile from proposed electric railroad. Soil in fine state of cultivation; adapted to grain and grass. Land level and watered by streams, and a beautiful, bold spring in the yard. Good dwelling and outbuildings; two new stock barns. Greater part of farm in grass. Price now, \$20 per acre.

No. 4.
Contains 100 acres, all under cultivation, and in good condition. Good frame dwelling and all necessary outbuildings in good condition. Situated on the pike, with market wagons passing every day, paying Washington city prices for produce. Splendidly situated for fruit, poultry, dairy and trucking. Price now, \$2,000, on easy terms.

No. 5.
Contains 163 acres; one-half under cultivation; balance in second-growth timber. Good seven-room dwelling and necessary outbuildings; good orchard in fine fruit section. Farm lies near Southern railroad, twenty miles from Washington; well watered; a splendid dairy farm. Price, \$2,000.

No. 11.
Contains 315 acres in high state of improvement. Large frame dwelling, 10 rooms, 2 large cattle barns, and all necessary farm buildings in good repair. Land watered by spring branches. Situated in aristocratic neighborhood. Convenient to depot and to Washington market. Price, \$50 per acre.

The above-described farms are situated in a neighborhood of refined citizens, with good labor plentiful, and will not be on the market long before being sold. For further information and a more detailed description of any one of them, write to
W. E. MILLER,
Herndon, Va.

nestly hope, however, that our Heavenly Father may open a way for you to do so.”
A few weeks after the conversation recorded above, Mrs. Heningham passed away, heaven borne for dying seems scarcely the right term to apply to the passing away of so pure and gentle a soul. The neighbors thought Emily not only peculiar, but somewhat insensible, because she did not give way to stormy grief or gloomy despair; but amid her grief and loneliness she was sustained by a keen realization of the truth that her mother had passed into “the land of the living,” the truly living, returning into the flower of an exquisite and eternal youth, reunited to the lover and husband of her youth, and enjoying every truly human faculty, only exalted to a far higher degree of perfection than is possible in the life of the body.
But although Emily did not give up to clamorous grief nor persistent depression, yet all her life long she cherished as something inexpressibly dear and sacred, the memory of her mother, whose influence always lingered about her, helping to shape and ennoble her whole subsequent life.
After the first few days of bereavement had passed away, Emily began to revolve in her mind what arrangements she should make for the future. Fortunately, she was naturally of a decided and self-reliant disposition, and these traits had been strengthened by the experiences through which she had passed since her father’s death. They could no longer live at their old home, which, for several years past, they had held only by the frail tenure of their mother’s life estate, and now with the exception of a small piece of property that had belonged to her, they had nothing. Their old home was a noble one, situated in the Piedmont Valley on James river. It bore the name of “Soldier’s Joy,” which Emily’s great grandfather had bestowed on it, in the joy of his heart when he returned from the Revolutionary war, to sit down under his own vine and fig tree with his family.
Situated on a gentle hill, the house commanded a landscape of peaceful beauty, James river flowing between its willow fringed banks, wide bottom lands on either side, covered with tobacco, or waving grass or long serried ranks of corn, the canal following the line of the river, bordered by locusts and other trees, which in summer were profusely festooned with garlands of white dermats and scarlet trumpet flower, whilst “Some blue peaks in the distance rose to give a finishing beauty to the scene.”
The yard at “Soldier’s Joy” was encompassed by a belt of beautiful, cone-like cedars, whose boughs were musical with the songs of birds. The garden was bisected by a central walk dividing the flower and vegetable departments, like the line between poetry and prose. The walk was bordered with box, a shrub dear to our

MORPHINE

OPIUM AND WHISKEY HABITS CURED AT YOUR HOME.

Private Sanatorium for Complicated Cases.

WHAT THOSE SAY WHO ARE CURED.

Evidence Voluntary and From Such Men as Dr. Tunstall and Others Admits of No Doubt.

THE NELSON COUNTY MEDICAL & SURGICAL SOCIETY.—DR. W. M. TUNSTALL, PRES'T.

LOVINGSTON, VA., Dec. 12, 1902.
Dr. B. M. WOOLLEY, Atlanta, Ga.:

Dear Doctor,—As I am alone in my office to-night, and supposing that you are not unlike other M. D.'s in appreciating good reports from their patients, I shall do what I have often and for quite a while intended, drop you a few lines.

You have a great number of cases, but I shall feel it deeply if you do not recall my sad case. I am glad to say that I firmly believe that I am entirely and permanently cured of the Drink Habit, as I have never even so much as wanted a drink in any form since I took your eradicator, now eighteen months ago. It was the best Ten Dollars I ever invested. Unfortunately people are skeptical, and especially so as regards whiskey cures, as I freely admit I was. But not so now (as regards your remedy), and my chief regret is that I had not used it before I did and that I cannot personally tell every one addicted to the use of intoxicants my experience.

This endorsement of your remedy, as you are doubtless aware, is positively prohibited by the “American Code of Medical Ethics,” of which I am a strict adherent, but my excuse is plain, for I would feel that I was not a “manly man” could I not speak my honest convictions not for your advantage, but all mankind.

I am glad to say the above is entirely voluntary on my part, as I have not, as you know, heard from you for fully twelve months. With my best wishes I am sincerely and gratefully yours,

W. M. TUNSTALL, M. D.
Address for book and full particulars, Dr. B. M. WOOLLEY, 200 Lowndes Building, Atlanta, Ga.

The RICHMOND, FREDERICKSBURG and POTOMAC R. R. and WASHINGTON SOUTHERN R'Y

Form the Link connecting the

Atlantic Coast Line R. R.,
Baltimore and Ohio R. R.,
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Pennsylvania R. R.,
Seaboard Air Line R'y
and Southern R'y.

Between all points, via Richmond, Va.

Fast Mail, Passenger and Express Route between Richmond, Fredericksburg, Alexandria, Washington, Baltimore, Philadelphia, New York, Boston, Pittsburg, Buffalo and All Points North, East and West.

W. P. TAYLOR, Traffic Manager, Richmond, Va.

Mention the Southern Planter in writing.

ELMWOOD NURSERIES.

ASPARAGUS

100,000 2-yr. old Asparagus roots, 5 varieties. A special rate of \$3.50 per 1000 for 2 mos. for BARR'S, PALMETTO, CONOVER.

APPLES

A large general assortment, including WINESAPS and YORK IMPERIALS.

Splendid Assortment of Ornamental, Shade and Fruit Trees.

EGGS from B. P. Rocks, Light Brahmas, Brown Leghorns at \$1.00 per 13.

WRITE FOR OUR CATALOGUE.

J. B. WATKINS & BRO., Hallsboro, Va.

Why Not Get the Best?

Pierce's Celery Compound

for Constipation, Dyspepsia, Malaria and Chills and Fevers, and a general tonic tablet.

Send for free sample, its costs you nothing to try the best family medicine on earth.

AGENTS WANTED.

NATURE'S REMEDY CO.,

WASHINGTON, D. C.

PILES CURED PERMANENTLY By LOMOLO TABLETS.

A pleasant home remedy that is guaranteed to cure. One of the purest and best medical preparations ever compounded. Let us prove our statements. All correspondence strictly confidential. Write us. Dr. M. L. GATES, Pres. Lomolo Remedy Co., 288 Stewart Bldg., New York City.

THE KEELEY INSTITUTE GREENSBORO, N.C.

For the treatment of THE LIQUOR, OPIUM, MORPHINE and other Drug Addictions. The Tobacco Habit, Nerve Exhaustion

AGENTS.—We can put you next to the best sellers out; sell everywhere on sight; failure impossible; our proposition surprises everybody; work up steady trade and income. Sample circulars free.

DULL SUPPLY CO.,

126 Wallace St.,

FORT WAYNE, IND.

ancestors' hearts. The flower beds were planted in lilies of the valley, hyacinths, white violets, tulips, pinks and peonies. The roses consisted of the Greville, the damask, the velvet, the tiny little multiflora, the moss rose, the seven sisters with their varying tints, all blushing on one stem. Then there were lilacs, both white and purple, the fragrant yellow jessamine and delicate, white star jessamine, noblest of all flowers. Altogether, it was a charming old garden.

We have seen above that the orphans had one little piece of property inherited from their mother. This was a cottage within a mile or two of a popular watering place in the mountains of Virginia, with twenty or thirty acres of land attached to it. The way it came into Mrs. Henningham's possession was as follows: She had an old aunt, Miss Melissa Allison, who had great faith in the efficacy of the waters at the above mentioned resort, but who could not stand the noise and bustle of a crowded watering place, and who therefore bought a little tract of land a few miles from the springs and built herself on it a cottage, to which she resorted each summer in her own carriage, attended by her own cook and maid, and accompanied by one or two nieces or cousins. When the old lady died she bequeathed the cottage and tract of land attached to it to her niece, Mrs. Henningham, and now this little piece of property was the only resource Emily had, except her capacity to teach.

(To be Continued.)

ASTOUNDED.

During a visit to the South with an eclipse expedition some years ago an eminent American professor met an old negro servant whose duty it was to look after the chickens of the establishment where he was staying. The day before the eclipse took place the professor in a idle moment called the old man to him and said: "Sam, if to-morrow morning at 11 o'clock you watch your chickens you will find they will all go to roost."

Sam was skeptical, of course, but when at the appointed time next day the sun in the heavens was darkened and the chickens retired to roost, the negro's astonishment knew no bounds. He approached the professor in awed wonder. "Massa," he asked, "how long ago did you know dat dem chickens would go to roost?"

"Oh, a long time," said the professor, airily.

"Did you know a yeah ago, massa?"

"Yes."

"Den dat beats de debil!" exclaimed the astonished old man. "Dem chickens wuzn't hatched a yeah ago!"—*The American Inventor.*

What should you do if you split your sides with laughter? Run 'till I got a stitch in them.

Little Chicks

Thrive when fed on our

BABY CHICK FOOD.

A perfect balanced food. Send for free sample and our large illustrated catalog of POULTRY SUPPLIES.

INCUBATORS and

BROODERS.

FANCIERS' SUPPLY CO.,
517-519 West Broad St.,
Richmond, Va.

EVERYTHING FOR THE FANCIER.

White Plymouth Rock

Eggs during June and July, 13 for 75c.; 30 for \$1.50. No White Holland Turkey eggs for sale after June 10th.

JOHN A. CLARK, - Shirley, Va.

SPECIAL SALE

Pen, very fine Barred Plymouth Rock chickens, as follows:

8 3/4 full stock 1 year old hens, my own raising; 1 thorough-bred hen from S. B. Johnson yards; 1 thorough-bred cockerel, my own raising. These are very fine birds, beautifully marked. They are well worth \$15.00, but to sell quickly will take \$12.00. This is a rare opportunity.

PIEDMONT POULTRY PLACE,

Miss E. Callie Giles, Prop. Whittle's Depot, Va.

32 Varieties Best Poultry

Reduced price on eggs bal. of season. Get my fine catalog, is free for stamp. Many breeding birds to offer, I can please you

in either old or young stock.

JNO. E. HEATWOLE, Harrisonburg, Va.

BROWN LEGHORNS.

Young stock for sale in

Fall. Prices reasonable.

White Plymouth Rocks.

R. W. HAW, Jr., - Centralia, Va.

PIT GAMES:

Black Devils and Red Horses.

These cocks won 90 per cent of battles fought in 1901 and 1902 and have never lost a battle when gameness and cutting qualities could win. Choice lot of young and old stock for sale.

THOS. W. JARMAN, Yancey Mills, Va.

Pure-bred, young,

Barred Plymouth Rock

hens and roosters, for sale; 75 ct. each. Miss S. M. HITER, Ellisville, Louisa Co., Va.

ANGORA GOATS are handsome, hardy and profitable. For large circular address E. W. COLE & CO., Big Clifty, Ky.

WANTED!

ALL KINDS OF

LIVE WILD BIRDS AND ANIMALS

Particularly Deer, Wild Turkeys, White Squirrels, Ducks, Swans, Etc.

CECIL FRENCH,

718 Twelfth St. N. W., Washington, D. C.

BARRED and BUFF PLYMOUTH = ROCKS AT HALF PRICE.

FRED NUSSEY SUMMIT, Spots. Co., Va.

HAWKSLEY STOCK FARM.

Large ENGLISH BERKSHIRES B. P. ROCKS FOWLS,

Eggs from same, \$1 per 13.

J. T. OLIVER, Allen's Level, Va.

FOR SALE.

Large English Berkshire Hogs, Barred Plymouth Rock Chickens

BEN. BOLT, 60747, 430 lbs. as a yearling at head of herd. EGGS IN SEASON.**JOHN P. FOSTER, Noreek, Ohio Co., Ky.**

CHOICE YOUNG

BERKSHIRES

of Both Sexes, for Sale.

By Highclere Topper of Biltmore II, out of Imported Harlene.

Miniborya Farm, Box 904, Richmond, Va.

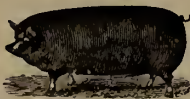
ESSEX PIGS—FOR SALE.



Some fine Pigs, from Registered Stock, not mated, at \$10.00 per pair, crated F. O. B. 8 to 10 weeks old. Your orders solicited.

L. G. JONES, Bethania, N. C.

Registered P. Chinas
Berkshire,
C. Whites. Fine large
strains. All ages, mated
not a in, 8 week, pigs.
Bred sows. Service boars
and Poultry. Write for prices and free circular.
P. F. HAMILTON, Cochranville, Chester Co., Pa.



Don't Like Cheap Stuff No How

Even the best is never too good. You'd better buy of Owens. Finest Stock. Prices right. **DUROC JERSEY**, best all purpose hog; also **POLAND CHINA**. **B. P. R. Chickens**, **M. B. Turkeys**, **M. P. Ducks**. Eggs in season. Write, or better still, call and see.

THE CEDARS**W. L. G. OWENS,****P. and S. FARM.****Midlothian, Va.**

WANTED—Pair Pure Bred PERCHERON
and **CLYDESDALE** Brood Mares; **DUROC**
Boar and Sows; one **SHROPSHIRE**, **SOUTH-**
DOWN and **LINCOLN** Ram and five Ewes.
Address **STOCK**, care Southern Planter, with
prices and particulars.

SOME AMUSING LETTERS.

Platte City, Mo., Jan. 25, 1903.

Gentlemen,—The wheels I got of you carried an old Spanish cannon from Tracey to Platte City over a turn-pike road with rocks sticking above the surface four inches. The cannon weighed 14,000 pounds, and people expected to see the wheels break down, but they didn't. I broke two axles and pulled the tongue out once, but the wheels did not break, and if in 1,000 years from now any one visits Platte City the old cannon will still be standing and people will tell about the little sprindling wheels that carried it there.

Yours truly,

J. C. H.

Evansville, Ind., April 21, 1903.

Gentlemen,—Some time ago I bought a set of metal wheels of you, and like them very much. I have trouble keeping my wagon at home, as my neighbors have bothered the life out of me ever since I got it. I would not do without it, and never use my high wagon at all, except when my neighbors have my little wagon. As ever, I remain, Yours respectfully,

C. H.

Dover, N. H., April 6, 1902.

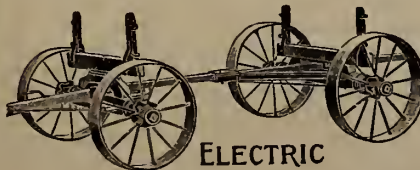
Dear Sirs,—From your catalogue I believe you sent me stronger wheels than I ordered. You must have thought I was looking for a bargain, and I certainly got one, as they are as good to-day as when they left the shop and run one-third easier on smooth, hard road, and two-thirds easier on a soft or sandy road. We would have better roads with less expense, could draw the same load easier, have fewer balky horses, and our chances of reaching heaven would be increased 25 per cent. if we all used wide tired metal wheels.

Thanking you for the new catalogue and booklet, I am,

Very truly yours,

C. E. H.

The original of these letters can be seen at the office of the Electric Wheel Co., Quincy, Ill., to whose

**ELECTRIC**

wheels and wagons they refer. Send for their free catalogue and know more about their wheels and wagons.

A BUSTED BRONCO.

To the Gazette:

Bronco busting on the range is always an interesting topic to the boys who are raised upon the farms of the great Central West, and who often mount unbroken colts for the first time while they are running in the pasture, frequently without having saddle or bridle on them. After wit-

Warranted
to give satisfaction.



GOMBAULT'S CAUSTIC BALSAM

A safe, speedy and
positive cure for

Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a **HUMAN REMEDY** for Rheumatism, Sprains, Sore Throat, etc., it is invaluable.

Every bottle of **Caustic Balsam** sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.**DEATH TO HEAVES**

Guaranteed

NEWTON'S Heave, Cough, Dis-
temper and Indigestion Cure.
A veterinary specific for wind, throat and stomach troubles. Strong recommends. \$1.00 per can. Dealers. Mail or Ex. paid. **Newton Horse Remedy Co., Toledo, Ohio.**

Shropshire Rams.

In this my annual offering of Rams, I feel safe in saying that it contains one of the best lot of yearling Rams that has been offered at the price in the United States for a long time. These Rams are 14 months old, and weigh (May 15th) 150 to 163 pounds, actual weight. They have individual merit backed by strong breeding. Careful selection will be made for parties at a distance.

ENGLISH SETTER PUPS.

(Count Rodo, ex-Gladys R., both prize winners.)

WARREN RICE, Winchester, Va.

WOODLAND DORSETS.

ONE of our customers writes: "My sales of grade Dorset winter lambs run this year: first 87 head brought \$870; then prices declined somewhat. I am looking for another good Dorset ram." Woodland Dorsets are standard in excellence.

J. E. WING & BROS., Mechanicsburg, Ohio.

150 JACKS, JENNETS and Mules 150



Best assortment I ever owned. Can suit you exactly. Write for description and prices. Also will sell two Percheron Stallions at close figures.

BAKER'S JACK FARM,**Lawrence, Ind.**

Mention the *Southern Planter* in writing.

BERKSHIRES

ANNEFIELD HERD

Represents the

Finest Blood Lines

in England or America.

Stock for sale at all times.

Correspondence Solicited.
Inspection Invited.

EDW. G. BUTLER, Annefield Farms,
Briggs, Clarke Co., Va.

Poland-China and Tamworth Pigs for Sale—

eligible to registration; also

Hampshire Down Sheep

and grade Hereford cattle, $\frac{1}{2}$ or $\frac{3}{4}$
bred. Calves, yearlings and 2 yr. old.

J. C. GRAVES, Barboursville, Orange Co., Va.

"MEADOW BROOK STOCK FARM."

Shropshire Sheep.

Very fine yearling bucks, sired by best
English bucks, from pure-bred native
ewes. Fine ewe lambs for sale.

C. A. SAUNDERS, Culpeper, Va.

SHORTHORN BULL CALVES 3 to 10 mos. old FOR SALE.

Close descendants of the World's Fair greatest
winners in 1893, and also up to the present time.
SPECIAL OFFER:—A 1-year old Roan Bull Calf at
\$75 if taken soon.

Poland-China Pigs of the best and most fashion-
able breeding. Spring Pigs now ready.
Pedigree furnished with all stock sold. Come
or write.

WM. T. THRASHER, Springwood, Va.

2 Nice Red

SHORTHORN BULL CALVES

for sale, ages 2 mos. and 6 wks.

Sire, Reg and Scotch topped; Dams
high grade shorthorns, dairy strain.

Prices cheap, quality considered.

REPASS BROS., Maplewood Farm, Wytheville, Va

2 SHORTHORN BULL CALVES FOR SALE.

Calved May 1st and 8th
Grandparents Registered.

THOS. B. DAVIS, Stanardsville, Greene Co., Va.

Ayrshires, Berkshires and Oxford-Downs.

Ayrshire Calves of both sexes, Berkshire
Pigs and Boar and 2 Oxford-Down Rams for
sale.
MELROSE CASTLE FARM,
Enos H. Hess, Manager, Casanova, Va.

nassing a genuine bronco busting I
can truthfully say that although
"busted" may be rather an inelegant
phrase it much more comprehensively
and correctly expresses the condition
of the bronco, or horse, after he has
survived the course of treatment com-
monly known as "busting," than does
"trained" or "broken." To give the
impression that it is the only method
employed, that there are no carefully-
trained horses, would be a great in-
justice to the very many excellent
horsemen of the West who love their
horses and whose horses love them.

One bright Sabbath morning last
summer I saw a group of horsemen ap-
proaching at a gallop—half a dozen
wild, happy, young fellows from 18
to 20 years of age, who, in response
to a greeting and a query, shouted
back: "We're going to have some fun;
we're going to bust a bronco." Having
nothing else to do just then (there
was no church within twenty miles)
I decided to watch the sport. The vic-
tim selected was an under-sized 3-year-
old, tough and wiry, and the blood of
the cayuse ran strong within his veins.
A few minutes' hard riding separated
him from the band. Then how hard
he tried to regain it, dodging, turning,
running until the sweat streamed from
every pore of his body and his breath
came quick and hard! Suddenly a
lasso whirled through the air, the loop
encircled the bronco's neck, the throw-
er drew in his horse, but the bronco
did not know what was coming. When
the rope tightened with a jerk the
bronco was thrown sprawling on the
ground. Quickly he jumped to his
feet and stood tugging at the rope that
tightened around his neck, shutting
off his wind until another rope was
thrown around his fore legs and he
was again thrown upon the ground.
Next a heavy cowboy saddle was put
upon his back. Poor bronco groaned
as a pair of muscular arms drew the
cinch up tight around his body. After
vainly striving to throw the saddle
from his back and to crawl through
the girth the bronco stopped to rest a
moment.

One of the boys was a newcomer, a
lank, ungainly youth of 18. It now
became apparent that the sport was
to be something of a boy-busting as
well as bronco-busting. After much
persuasion, taunts and the exaction of
a solemn promise from the other boys
to keep hold of the rope so bronco
could not run away, he consented to
mount. He settled himself nicely in
the saddle, the bronco being too sur-
prised to move, when Jim quickly ran
behind bronco, catching him across
the thighs with an upward jerk of the
rope. The bronco jumped straght up
in the air; he went so high he had time
to arch his back like a rainbow, tuck
his tail between his hocks, his nose
between his knees and set every
muscle in his legs firm and rigid be-
fore coming back to earth again. When
his hoofs struck the ground a look of
mingled pain and terror came over the

Kentucky HEREFORDS

Headed by the famous
ACROBAT

No. 68460 and the celebrated

IMPORTED BRITISHER

No. 145096 Champion Bull over all breeds in
England and Grand Sweepstakes Champion
at Chicago 1902 Live Stock Exposition.

We can furnish buyers with anything they
wish from the FANCIEST THAT CAN BE
BRED to the cheaper class usually desired by
the beginner. Write us before buying. Glad
to answer inquiries.

Giltner Bros., Eminence, Ky.

Hereford Cattle.

A number of young Registered
HEREFORD Bulls and Heifers,
not akin, at reasonable prices.

STONEHURST FRUIT AND STOCK FARM,
Union Mills, Fluvanna Co., Va

FOR SALE 8 Reg. HEREFORD BULLS

From 6 mos. to 3 yrs. old.

8 Reg. HEIFERS

From 6 to 18 mos. old. At reasonable prices.
HAYFIELDS STOCK FARM, Cockeysville, Md.

DORSETS and HEREFORDS.

I am now offering my superior herd bull
ROY MAY, 89183; and some fine male calves. I
am also booking orders for Dorset rams and
ram lambs.

H. ARMSTRONG, LANTZ MILLS, VA.

ELLERSLIE FARM Thoroughbred Horses

AND SHORTHORN CATTLE,
Pure Southdown Sheep
and Berkshire Pigs.

FOR SALE. R. J. HANCOCK & SON,
CHARLOTTESVILLE, VA.



COOK'S CREEK HERD

Scotch-Topped
Shorthorns

Herd Headed by Governor Tyler, 1585 48.
Young Bulls for sale. Inspection and corres-
pondence invited.

HEATWOLE & SUTER, Dale Enterprise, Va.

REGISTERED JERSEY BULLS FOR SALE AT A BARGAIN.

Calves 1 and 2 yr. olds; also
EGGS FOR HATCHING, W. & B. P. Rocks,
W. & B. Leghorns, and S. L. Wyand-
ottes, 75 cents for 15.

J. B. JOHNSON, Manassas, Va.
"CLOVER HILL FARM."

ANGUS CATTLE FOR SALE AT A BARGAIN.



High-Grade and Registered Angus Cattle; all ages of males and females. Get our prices before you purchase. We can save you money.

One Very Fine Dark-Gray Horse, 16 hands, weighs 1,125. He is very stylish, quick and active. A splendid driver, well broken in single and double harness and a fast mover. He is cheap at our price, \$200.00.

W. M. WATKINS & SONS,
Randolph, Va.

Charlotte county.

ABERDEEN-ANGUS BULLS FOR SALE.

1. My Herd Bull, ROCKBRIDGE ABAC-TOR, No. 40364, 3 yrs. old Dec. 2d last; \$400.
2. A Bull Calf, born Dec. 20th; sired by the above "Abactor"; dam, "Pride of Potomac"; No. 42607; \$100.

3. A Bull Calf, born Dec. 12th; sired by the above "Abactor"; dam, a thoroughbred Angus Cow bred by the late William A. Ruff. Pure breeding can be shown for this calf, but being out of an unrecorded dam he cannot be registered; \$50.

None of these will be sold until October, and should the calves at that time not prove to be good specimens of the breed they will be withdrawn from sale.

B. F. DAY, Glasgow, Va.

MONTEBELLO HERD OF

Aberdeen-Angus Cattle.

3 Reg. Bull Calves for sale. Ages, 10, 6 and 5 months.
1 Thoroughbred (not entitled to registration), male, 2 months old.

BERKSHIRE PIGS of Biltmore Strain.

L. H. GRAY, LOCK BOX 58, ORANGE, VA.

FOR SALE.

My **ABERDEEN-ANGUS** Herd Bull,
Hero of Bunker Hill, No. 31,462.
He is an extra good breeder.

J. TABB JANNEY, Van Clevesville, W. Va.

"PINE PARK STOCK FARM."

Aberdeen Angus

Cattle for sale.

J. H. ELLIS, Thornhill, Orange Co., Va.

Shadow Brook Poultry Farm.

Extra fine pedigreed Scotch Collie Pups \$5.00 each. A trained yearling female \$10.00. Thoroughbred B. P. Rock eggs \$1.00 per 30. Yearling hens \$1.00 each. Pekin ducks \$1.00 each. M. B. turkeys, one year old, \$5.00 pair.

C. H. BENNETT,

Goodman, Va.

countenance of his rider, who bounded from the saddle and a moment later stood at a safe distance pale and trembling, looking with surprise and fear at the bronco, by no means enjoying the shouts of laughter from his companions.

A more experienced rider next mounted; if the bronco bucked the quirt lashed his sides; if he tried to run the heavy curb bit brought him to his haunches; if he stood still he cruel spur was dug into his flank. Thus one by one the boys tried their skill at the busting until the bronco was completely exhausted and looked as though he wanted to die. As a last resort an old, battered tin pail was tied to his tail. He spent a few moments in a fruitless endeavor to kick it off and then collapsed entirely. Nothing could make him budge an inch or lift a foot. He was pronounced "too tame" by the boys, who pulled off the bridle, mounted their horses and disappeared in a cloud of dust. Two days later I saw the bronco sneak out of a clump of scrub pine and greasewood. There was a look of sadness in his eye. His ears drooped and his tail hung limp as with suspicious glances and halting steps he dragged his stiffened legs across the range to join the band—a busted bronco.

Breeders' Gazette. HAYSEED, JR.

WAS HE THE LAST?

President Tucker, of Dartmouth College, is made the victim of one of the best jokes of the season by a story told by one of his closest friends, now in the city. A couple of summers ago the college president spent a part of the heated season on a farm up in the northern part of Vermont. It was a delightful place, but the classical visitor found that even that haven of rest had some drawbacks. As the following summer approached Dr. Tucker again bethought himself of the quiet farm as a place of summer refuge, and wrote to the farmer: Your place is a well-spring of delight; it is picturesque, comfortable, home-like. The house is well kept, the table worthy of the highest commendation, and, in short, everything save two features is conducive to utmost satisfaction. These exceptions are the kitchen methods of your hired girl; and second, the fact that the pen in which you maintain your swine is located in too close proximity to the house. If these exceptions were eliminated it would be a source of the most profound pleasure for me to again join you this coming summer."

The farmer received the note, and anxious to again have the distinguished boarder with him, wrote:

"Dear Mr. Tucker,—Yours rec'd, and I hasten to reply. We will be glad to have you with us. Hannah has went, and there have not been any Hogs on the place since you left last summer."—*New York Tribune.*

V. P. I. Farm Bulletin

Our Jersey Herd Bull for sale—PEDRO'S VIRGINIUS, 45919, grandson of Pedro, 3187, and of Marjoram Second, 12805, both of World's Fair fame. The Bull offered has been used in our herd for several years, and is sold to prevent in-breeding. Price low, quality considered.

D. O. NOURSE, Prof. of Agr.
Blacksburg, Va.

Red Polled Cattle FOR SALE.

ALL PURE BRED & REGISTERED.

1 Bull, 3 years old. Large and well formed. Price, \$125.00.

1 Cow, 4 years old. In calf by above bull. Price, \$125.00.

1 Heifer, 2 years old. In calf by above bull. Price, \$15.00.

1 Bull calf sired by above bull, four months old. Price, \$50.00.

The above cattle are all in fine, healthy condition, and are sure breeders.

H. K. FOSTER, Blacksburg, Va.

Swift Creek Stock and Dairy Farm



Has for sale a large number of nice young registered A. J. C. C.

JERSEY BULLS AND HEIFERS.

None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 10 to 12 months old, \$25; Heifers, same age, \$35. POLAND CHINA PIGS, \$5 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battleboro, N. C.

ST. OMER HERD

Offers young bulls fit for service, out of tested dams with good yearly records. Strong in Exile of St. L., King of St. L. and Stoke Pogis of Prospect. Reasonable prices.

JOS. T. HOOPES, Bynum, Md.

FOR SALE.

2 JERSEY COWS; 1 SHARPLES SEPARATOR 10 cans and jackets for same, 1 ICE BOX.

Am changing my business, so will sell the above at very reasonable price. address

C. M. BASS, Rice Depot, Va.

COLLIE PUPS

By Imported Sires. Sable and white and tri-colors. Prices \$5 to \$15. Older ones correspondingly low—Book on Training, 50 cents; FREE if you buy a Collie. MAPLEMONT STOCK FARM, Albany, Vermont.

ANGORA GOATS.

57 head pure, grade and common goats for sale.

C. H. NOLTING,

P. O. Box 322,

RICHMOND, VA.

GETTING A CONSTANT WATER SUPPLY.

Of the many plans in use for the raising of water there is nothing that takes precedence of the power of the natural stream, when proper machinery is installed to apply it. And just here it is proper to remark that our advertising columns are showing in the Rife Hydraulic Engine, a machine most excellently adapted to this purpose. Its varying sizes meet the requirements of a large or limited service, and the power required is so small in proportion to the duty it performs that there are but few country places with running streams where it will not give most satisfactory service. An idea of the machine may be gathered from the cut shown here. It is not only effective, but simple in the extreme and very durable. A beauty about all such powers, and particularly the Rife Engine, is that when once installed there is practically no expense for many years to come in the running. Many Rife Engines have been in constant operation for upwards of ten years without a dollar's



worth of repairs. In the vicinity of New York, where they are best known, they are a familiar sight, seeming to have been adopted with one accord as the improved plan of raising water for all purposes at the country seats. About a dozen years ago, one of these engines was installed on the famous Biltmore estate at Asheville, N. C., and it proved so effectual that to-day there are now fourteen Rifles employed, furnishing water for all the various purposes for which they have use. Very recently an irrigating plant has been established in the Hawaiian Islands, near Honolulu, with a Rife Engine for its base, and furnishing 3,000 gallons per minute. These are but suggestions of its popularity and scope of duty. To the small country user it suggests easy possibilities in the way of an economical and constant fresh water supply. Whoever is wrestling with a water problem should write to the Rife Engine Co., 126 Liberty street, New York, for their catalogue, and get further information.

What is the difference between a clock and a partnership? When a clock is wound up it goes; when a firm is wound up it stops.

ARMOUR'S BLOOD MEAL Cures Scours In Calves.

First proved by the Kansas Agricultural Experiment Station, and since corroborated by thousands of leading stockmen who have used it without a single failure. Equally effective for the diarrhea of all animals.

PREVENTS weak bones, paralysis of the hind legs and "thumps" in pigs; "big head" of foals; "rickets" of all young animals; abortion due to incomplete nutrition, and a host of other troubles.

A Potent Food for Work Horses, Dairy Cows, Poultry.

Write us for booklet giving valuable information about Blood Meal and our other feeding products. Consult us free of charge regarding stock diseases.

THE ARMOUR FERTILIZER WORKS,

Chicago. Omaha. Baltimore. Atlanta. Jacksonville.

"ELLERSLIE."

SHORTHORNS SOUTHDOWNS

Red Bulls from 3 to 6 mos. old, all by Fairfax (very handsome red bull) by Knight of The Clifton; out of registered cows which have been selected for milking as well as beef purposes.

1 and 2 yr. old rams by Warwick, imported from the Sandringham flock of KING EDWARD VII, out of ewes from the celebrated DRUID HILL PARK (Baltimore flock) These are unregistered

ed but are first class in every respect.

REMEMBER.—We do not ask fancy, but *farmers' prices*.

Our stock is not in show ring but *working condition*.

R. J. HANCOCK & SON, Charlottesville, Va.

HILL TOP STOCK FARM.

Berkshire Hogs and South-Down Sheep

A SPECIALTY.

S. Brown Allen, who succeeds H. A. S. Hamilton & Co. in the ownership and management of this celebrated Stock Farm, offers a few Berkshire Pigs that have been bred without regard to cost, and one and two year old

SOUTHDOWN BUCKS,

that cannot be excelled in this country. We have swept premiums on this stock over all competitors at Fairs in this and adjoining States

S. BROWN ALLEN, Staunton, Virginia, (Successor to H. A. S. HAMILTON & Co.)

BERKSHIRES.

Imported Sir John Bull, No. 3609—B. H. B.
Imported Dansfield Roland, No. 60528—B. H. B.
Imported Columbia, No. 60527—B. H. B.
Imported Royal Carlisle, No. 4841—B. H. B.

And that Immensely Princely Hog

Uncle Sam, No. 7233 are the sires of my Spring and Summer offerings of pigs. Does this list of Royalty suit your fancy? They represent the most famous Berkshire breeders of England. Fancy stock, moderate price

Hunting Dogs and pups for sale. Setter pups, \$5.00 each.

Short Horn (Durham Cattle) for sale. Write for particulars.

THOS. S. WHITE, Fassifern Stock Farm, Lexington, Va.

When corresponding with our advertisers always mention the
Southern Planter.

HOW THE DEBT WAS PAID.

This anecdote was told by the late Zebulon B. Vance, at one time Governor of North Carolina, and afterwards United States Senator.

He was seated in his office one day when an old negro, one of his "charity" clients, came in. Taking off his hat, the old man scraped his feet, and, bowing very obsequiously, said:

"Good mornin', Marse Zeb; how is you an' de Mistis dis mornin'?"

"Quite well, thank you, Romulus. How are you this morning?"

"So's to be about, thank de Lord, but I still got a little misery."

"Well, Romulus, you are always complaining, but what can I do for you this morning?"

"Dat's jest what I come to see you 'bout, sah. You know dat triflin' nigger Jim Simpson, doan you?"

"Oh, yes; certainly I know Jim, but what's he done to you?"

"Dat's jest hit, Marse Zeb; dat's jest hit; he ain't done nothin', dat's de trouble; dat nigger been owin' me ten dollars for nigh onto five or six years, an' he ain't never pay me nair cent, not nair cent, sah."

"Well, have you ever asked him for it, Romulus?"

"Ax him for it? Cose Ise axed him for it, and dat's how I come to come to you."

"Well, when was the last time you asked him for it?"

"Yistiddy, sah; jest as de sun was goin' down."

"Well, you say he didn't pay you?"

"No, sah; 'deed he didn't, an' dat's jest 'zactly how come I come to see you."

"Well, as he didn't pay you, what did he say; what excuse did he give?"

"Marse Zeb, dat no 'count triflin' nigger say he done been owin' me dat money so long, sah, dat de intrust done eat it all up, an' he didn't owe me nair cent, sah, not nair cent."

It was a busy thoroughfare in Edinburgh, and as the old lady was exhausted with the stir and bustle, she hailed a passing cab. The driver was at her side in a moment. Opening the door, he stood back to allow the lady to enter.

She made one or two weak efforts, but was unable to mount the step, and, at last, looking imploringly at the driver, she said:

"Help me in, good man, for I am very old."

The driver gently assisted his fare into the cab, and then he gallantly said:

"Well, mem, næ matter what age you are, you dinna look it."

His fare was increased by a shilling when the old lady reached her destination. And he deserved it.

What is the difference between a life of leisure and a life of idleness? They are the same thing, only different titles.

STUDEBAKER

A name that stands for character in vehicles—that guarantees you the worth of your money. You don't buy often. You want service. Then don't take chances. The character in Studebaker

Vehicles and Harness

starts in the raw material—that's the best obtainable and there's everything in the selection and the curing. The honesty continues all through the making and finishing. Results, longest life, fitness and greatest service. **You Always Find the Essentials**

in Studebakers. There's no slighting, no deception, no variance from high quality. That's why multiplied thousands pin their faith to them. Are you of the number? Local dealers most everywhere. Catalogue and particulars direct if requested.

STUDEBAKER BROS. MFG. CO.,

South Bend, Ind.

Chicago, New York, San Francisco,
Kansas City, Portland, Ore., Denver,
Salt Lake City, Dallas, Texas.



JERSEY CATTLE.

We have for sale, **Young Cows, Heifers and Young Bulls**, from cows testing **18 to 24 lbs. of butter in seven days**, and giving **40 to 60 lbs. of milk per day**. Also—

LARGE YORKSHIRE PIGS,

The coming bacon breed. Our stock is from the most noted breeders in England and Canada.

Write for prices. Address—

BOWMONT FARMS, SALEM, VIRGINIA.

JOHN S. FUNK,
GLEN FARM,

—IMPORTER AND BREEDER OF—

Polled
Durham
Cattle,

Shropshire Sheep,
Southdown Sheep,

Poland-China Hogs.

Berkshire Hogs.



All carefully bred regardless of cost.

SINGER'S GLEN, VA.

COMBINATION SALE of Thoroughbred Stock.

July 30th, 1903, Orange, Va., Second Day of Horse Show.

Shorthorns, Polled Angus, Holsteins, Devons, Jerseys, Guernseys, Hampshire and Shropshire Downs. Berkshires, Poland-Chinas and Tamworths.

Catalogues July 1st Further entries solicited.

MACON & CO. Auctioneers, Orange, Va.

When corresponding with our advertisers always mention the
Southern Planter.

A CROSS-BREED.

A buxom negro woman who had cooked for a number of years in the family of a Jewess announced to her mistress one morning her intention of quitting the job.

"Why are you going to leave us, Mary?" inquired the Hebrew lady.

"Well, Missus," explained the cook, "I's gwintah git mar'ied."

"That won't make any difference," said the lady, "there's room enough in my yard for you and your husband; you don't have to leave because you're going to be married."

"But," replied the colored woman sheepishly, "you don't know who I's gwinetah mar'y"; and, without giving the Jewess time to ask further questions, she said, "I'se gwinetah mar'y a Chinee, Missus."

The employer raised her hands in holy horror. "Oh, Mary," she said, "have you thought of what you're going to do?"

"Oh, yas, Ma'am," said Mary; "we's thought about it—we loves each uddah, Missus."

"I don't mean that," said the Jewess, "I'm thinking about your children, Mary. Have you thought about what they'll be?"

"Oh, Missus," said Mary, looking up in meek submission and intending no insult, "I knows dey'll be Jews, but I can't he'p it."—*Silas Xavier Floyd, in June Lippincott's.*

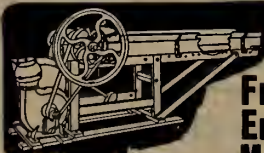
ONE BOTTLE CURED RINGBONE.

Schilling, W. Va., Jan. 23, 1903.

The Lawrence-Williams Co., Cleveland, O.:

I used GOMBAULT'S CAUSTIC BALSAM on a mare for ringbone. I cured her with one bottle. She is well and works all the time. I have ordered several bottles since for my neighbors. They have used it with good results. Two cases of ringbone I know of have been cured with it. I believe it the best liniment on the market to-day.—H. S. McCulty.

When does a dog become larger and smaller? When let out at night, and taken in in the morning.

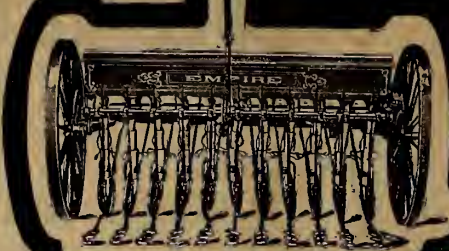


Freeman Ensilage Machinery

represents the modern idea. Illustration shows typical cutter with blower attachment. 11 sizes, hand cutting to belt power, with capacity ranging from 5 to 24 tons per hour. Traveling force feed reduces labor of feeding. Each machine easily and quickly fitted with shredder attachment.

Also make Wind Mills, Corn Shellers, Wood Saws, etc. Write for free catalogues 110.
S. FREEMAN & SONS MFG. CO., Racine, Wis.

EMPIRE DRILLS



**ACCURATELY MEASURE
ALL KINDS OF GRAIN
WITHOUT CHANGE.**

That is, if you set the Empire Feed to sow any amount from 24 to 128 quarts per acre, it will sow exactly that amount of wheat, oats or any other small grain without further change. A good stand of grain is assured, when you sow with an Empire Drill.

Empire Grain Drills do not bunch, skip or choke. Made in all styles and sizes.

Write for Free Catalogues.

EMPIRE DIVISION
AMERICAN SEEDING MACHINE COMPANY,
28 Monroe Street, Springfield, Ohio.

DUNTREATH BERKSHIRES

"BRED-IN-THE-PURPLE."

EXTRA CHOICE Young Pigs for sale, all eligible to registry, and now ready for shipment. Orders also taken now for late Summer and Fall shipments.

DUNTREATH STOCK FARM,

Box 666.

RICHMOND, VA.

REFERENCE: American National Bank of Richmond.

CISMONT DORSETS

CISMONT STOCK FARM offers well developed young Dorsets of the best blood of England and America.

Prices Reasonable.

IG. S. LINDENKOHL, Keswick, Albemarle Co., Va.

For Sale—A. J. C. C. BULL CALVES

Good individuals; well grown
and from heavy milking cows.

—Write—

FOREST HOME FARM,

So. R. R.

PURCELLVILLE, VA.



HAVE YOU EVER BEEN THERE?

Human System. You insist on eating medicinal ingredients with your Own food at every meal. Salt is a stomach tonic and worm medicine, Pepper is a powerful stimulating tonic, Mustard is a remedy for dyspepsia, Vinegar is a diuretic. You eat these medicinal ingredients almost with every mouthful of your food, and it is proven that these medicines promote health and strength for people and improve their digestion. "International Stock Food" contains pure vegetable medicinal ingredients that are just as safe, and as necessary an addition to the regular feed of your stock if you desire to keep them in the best possible condition. "International Stock Food" is endorsed by Every High-Class Farm Paper. It purifies the blood, stimulates and permanently strengthens the entire system so that disease is prevented or cured. "International Stock Food" is sold on a "Spot Cash Guarantee" by Fifty Thousand Dealers throughout the World. Your Money will be Promptly Refunded in Any case of failure. It will make your Cows or Pigs grow Amazingly and has the largest sale in the World for keeping them healthy. Beware of the many Cheap and Inferior Imitations! No Chemist can separate all the Different powdered Roots, Herbs, Barks and Seeds that we use. Any One claiming to do so Must be an Ignoramus or a Faker.

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EAU CLAIRE, WIS.
Dear Sirs:—I received your "International Stock Book" and was more than pleased with it. It is worth more than \$10.00 to me.
Very truly yours,
RICHARD J. MORRISSEY.

INTERNATIONAL STOCK FOOD CO.,
ODESSA, MO.
Dear Sirs:—Your "International Stock Book" duly received, and it is the best thing of its class that I have ever seen. There is a volume of useful articles in it from start to finish.
Respectfully,
GEO. W. NULL.

A \$3000.00 STOCK BOOK FREE

IT CONTAINS 183 LARGE ENGRAVINGS OF HORSES, CATTLE, SHEEP, POULTRY, ETC.

The Cover of this Book is a Beautiful Live Stock Picture Printed in Six Brilliant Colors. Size of the book is 6½ by 9½ inches. It cost us \$3000 to have our Artists and Engravers make these Engravings. It describes common Diseases, and tells how to treat them. It also gives Description, History and Illustrations of the Different Breeds of Horses, Cattle, Sheep, Goats, Hogs and Poultry. It contains Life Engravings of many very noted Animals, and also testimonials. The Editor of This Paper Will Tell You That You Ought to Have This Stock Book in Your Library for Reference. It Contains a Finely Illustrated Veterinary Department That Will Save You Hundreds of Dollars.

WE WILL MAIL IT TO YOU ABSOLUTELY FREE, Postage Prepaid.

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We Employ Over 300 People and have Hundreds of Thousands of Testimonials. Refer to Any Bank in Minneapolis.

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INTERNATIONAL STOCK FOOD CO., Minneapolis, Minn., U.S.A.

Largest Stock Food Factory in the World.
Capital Paid In, \$1,000,000.
600,000 Feet of Space in Our New Factory.

When President Edwin T. Alderman, of Tulane University, was called upon at a dinner he made a speech that suggested the oratory of the late Henry W. Grady, and its effect on the audience was electrical. By way of introduction he told of an old colored man named Pompey down in Louisiana who was stopped on the road by a white man with the question:

"Say, Pomp, where you going?"

"Ain'e gwine nowhere," said Pompey, promptly. "I've been where I'se gwine, I has."—*New York Sun*.

A professor in a western college had been annoyed by the tardy entrance of a student into the lecture room, and pointedly stopped talking until the man took his seat. After class the student went to the desk and apologized.

"My watch was fifteen minutes out of the way, sir. It's bothered me a good deal lately, but after this I shall put no more faith in it."

"It's not faith you want in it," replied the professor, "it's work."—*The*

Reg. HOLSTEIN-FRIESIAN

CATTLE of the Netherland, De Kol, Clothilde, Pietertje and Artis families. Heavy milkers and rich in butter fat. Stock of all ages for sale.

Reg. BERKSHIRES From noted strains, Imported Headlight, Lord Highclere and Sunrise.

DORSET SHEEP

B. PLYMOUTH ROCK CHICKENS,

N. & W. and Southern R. R.

T. O. SANDY, Burkeville, Va.

We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered LARGE ENGLISH BERKSHIRE Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

WALTER B. FLEMING,

Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.



THREE OF A KIND.

While we were visiting at a small village in one of the Carolinas we went one afternoon to see one of the old negro mammies in her own log cabin. She was highly honored at the condescension of "de ladies," and was much concerned that the call might not be disturbed by the presence of her children—"fo'teen pickaninnies," she called them. Of course, curiosity was too strong for the youngsters, and soon the one door was blocked with curly heads and wide-open eyes. When Mammy perceived them, she just turned around and, gathering up her skirts as one does in front of a flock of trespassing chickens, cried out "Shoo!" and the cough drops disappeared.

But towards the end of our visit Mammy needed the services of a helper to put out the jelly and cake that she insisted we eat. Stepping to the door, she called:

"Mariana!"

Soon three girls in single-piece coverings came bashfully, but curiously, through the door, and all were given orders by the bustling mother.

"But," said one of the callers in a half-jesting way, "are all three named Mariana, Mammy?"

"Yes," the old woman explained, "all three. You see, when de lil' g'ls came, 'fo I got 'round 'gain, de folks jest call 'em all Mariana, an's no good changin'. An', anyhow, when I wants a pickaninny, I jes' calls 'Mariana,' an' one's sho' to come."—*June Lippincott's Magazine.*

ALL-ROUND CURES.

"'Twere a new Governor of Newfoundland, and he were shocking careful of the sealers' health," began the old sealing captain, his deep-set eyes twinkling.

"The night afore the North Star left Sen John's for the ice he came aboard t' inquire what for medicine-chist we had.

"'You ought to have a ship's doctor aboard her with two hundred men shipped,' says he. 'Who gives out the medicine?'"

"'The cook, o' course,' I answers. 'But I'm sarten o' one thing, Governor,' I says, 'there's nothin' there that's pizen.'"

"'How do you know?' he asks pretty sharp.

"'Well,' I answers, 'a man comes runnin' to the cook and he says, 'My chum's sick, and I want some medicine for he.' The cook never asks no questions as to what's ailin'. He grabs up the first bottle he gits his 'and on and pours out some in a cup. If it don't do the man's chum no good, he comes back and the cook pours something out of another bottle, and so on till he strikes something that 'elps him. That's why I know there's nothin' pizen in that chist, or the cook would 'ave killed 'arf of 'em twenty v'yes ago.'"—*Suzette, in June Lippincott's.*

Registered HEREFORD CATTLE.

Service Bulls; Imported Salisbury 76059 (19083). Lars Jr. 85297.

FOR SALE—A choice lot of bull calves and yearling bulls. The bull calves sold recently weighed 600 lbs. at 6 mos old. Call and make your own selection Prices right.

MURRAY BOOCOCK, Owners, Keswick, Va.

HEREFORDS

Champion Prince Rupert No. 79,539

at head of herd.

A Few High Class Bulls and Calves For Sale.

Write me
before buying
elsewhere.

EDWARD G. BUTLER,
BRIGGS, - VIRGINIA.

Send for
illustration of
Prince Rupert.

Bacon Hall Farm.

Hereford REGISTERED Cattle

"TOP" BREEDING, CALVES NOT AKIN.

MOTTO—Satisfaction or no sale.

E. M. GILLET & SON, - Glencoe, Maryland.

C. C. TALIAFERRO,
NASONS,
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1903

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"MOUNT SHARON"
Reg. and Grade HEREFORD CATTLE
BRONZE TURKEYS & MUSCOVY DUCKS

STOCK FARM"
Registered SHROPSHIRE SHEEP
Registered POLAND-CHINA PIGS




NOW OFFERS FOR SALE

HEREFORD CATTLE.—Calves, entitled to registration, \$75 to \$100 Grade Calves by "Sir Edward" \$25 to \$40.

SHROPSHIRE SHEEP.—Bucks, one year old and over, \$15 to \$20. Buck Lambs, July delivery, \$10 to \$12. Ewe Lambs, July delivery, \$8 and \$10.

POLAND-CHINA HOGS.—Pigs, six weeks old, \$5. Pigs, two or three months old, \$7.50. Pigs, five months and over, \$15 to \$20.

M. BRONZE TURKEYS.—Toms, \$1. Hens, \$3. Eggs, per sitting of 12, when in season, \$4.

MUSCOVY DUCKS.—Pure White Drakes, \$1.25. Pure White Ducks, \$1. Pairs, \$2.25. Trios, \$3.

BARRED PLYMOUTH ROCKS.

ROUEN GESE.—Ganders, \$2.50. Geese, \$2.50. Eggs, per sitting, \$3.

WILLIAM L, Jr., No. 21058, half brother of Axtell, will serve a limited number of mares for \$25 the season. Mares boarded at lowest figures per month.

THE ONION AS A SEDATIVE FOR PAIN.

Editor Southern Planter:

My little boy, aged five years, had been suffering for a number of days with toothache and earache, caused by an abscess in process of formation at the root of the affected tooth. He had had a variety of treatment from various sources, including a good physician, but without relief, and last evening the pain and nervousness caused by lack of sleep seemed about to culminate almost in convulsions, and his mother and I had the prospect of a sleepless and anxious night before us. I happened to remember a simple remedy that my mother used with myself when a child. We took a large onion (the old Richmond onion they are called around here), roasted it in the fire, and when thoroughly done, mashed it up and bound it to his pulse as hot as could be borne on the side opposite to the affected tooth. The effect seemed almost magical. In twenty minutes the child became quiet, and in half an hour sunk into a profound slumber, which lasted the entire night, and he awoke in the morning much better and free from pain. Now, it seems to me that so simple and harmless a remedy and one so entirely free from danger ought to be generally known. It is certainly better in case of nervousness and pain to use this than to fill the system with dangerous drugs. I don't suppose any possible harm could come from its use under any circumstances. With the hope that its trial may bring the relief to some tired, wornout mother and suffering child, that it did in this case, I send this account to you, leaving it to your discretion to give it publicity through the columns of your valued publication. JOHN I. PRITCHETT.

Whitwell, Va.

MAGAZINES.

The July Century is distinctively a fiction number; and the list of stories is long and varied enough to please the most omnivorous appetite for fiction. Easily first in interest is Homer B. Hulbert's "The Sign of the Junna," telling the thrilling details of a British subaltern's search among the Himalayas for literary treasure-trove. How he found a remarkable book, now in the British Museum, but at the cost of twenty-three years' imprisonment in a mountain monastery, makes an unusual and engrossing tale. John Luther Long's "The Siren" is far from being a conventional romance, and it has the flavor of the sea; the coast is just the place to read the story of savage Brassid and the laughing Sea Lady. "Mahmoud Pasha of the D. P. W." is the title of an Egyptian and English story, by Frederic Courtland Penfield, former United States Diplomatic Agent to Egypt, which tells of a clever Indian device which located a disastrous break in the great dam. Other fiction of the issue includes: "A Lost Story," a posthumous work by

St. Albans School



**Prepares Boys
FOR UNIVERSITY OR
FOR BUSINESS**

SEND FOR ANNUAL CATALOGUE, IN WHICH IS
PUBLISHED "PLAN OF ST. ALBANS SCHOOL."

Address, W. H. RANDOLPH,
Head Master,
RADFORD, - - - VIRGINIA

SITUATED ON A
SUNNY HEADLAND
ABOVE THE
BANKS OF NEW RIVER,
IN THE
BLUE GRASS REGION
OF VIRGINIA

SUNNY HOME HERD OF ABERDEEN-ANGUS CATTLE.

BARON ROSEBOY 57666 (The great Westertown Rose, son of the world-famous GAY BLACKBIRD) in service.

The Sire is half the herd. In Baron Roseboy, is combined the typical "doddy" form with a pedigree that cannot be excelled. He is a brother of the great "Gay Lad" (sold at \$3050), who heads the largest Angus herd east of the Mississippi, is also brother of "Hector of Lakeside" at the head of the great Pope River herd of Illinois; is uncle of the "10th Laird of Estill" at the head of the greatest Angus herd in America.

On dam's side, Baron Roseboy traces direct to the Imp. Blackbird Bull, "BASUTO," said to be the best Blackbird Bull ever imported.

The females in the herd are "chips off the same block". Great bulls, great cows, mean great calves. Come and see them, or write

A. L. FRENCH, Proprietor, Fitzgerald, N. C.
Rockingham Co., 24 miles southwest of Danville, Va., on D. & W. Ry.

We Are Still in the Business....

"HILL TOP" Stock at Shadwell, Va.

Having changed our residence, we brought with us and have for sale a choice lot of HILL TOP stock.

**Jersey Cattle, Southdown and Shropshire Sheep,
Berkshire Hogs and B. B. R. Game Chickens.**

Our Berkshire Pigs are now closely sold up, but we will have a fine lot ready to ship by September 1st. We will be glad to serve our old friends and are always glad to make new ones.

We have won more premiums on sheep and hogs at State and County Fairs than all other breeders in Virginia combined.

H. A. S. HAMILTON & SONS, Shadwell, Va.

"The Oaks" Herd.
**OFFERS
FOR
SALE—**

2 Registered SHORTHORN COWS,
2 Registered MORGAN COLTS, and a few
good yearling SHROPSHIRE RAMS.

B. B. BUCHANAN, Bedford City, Va.

the lamented Frank Norris, author of "The Octopus"; Margaret Sutton Briscoe's "Red Tassels," David Gray's "The Braybrook Baby's Godmother" (another Gallop story), Will H. Harben's "A Question of Valor," Philip Berrill Mighels' "A Forty-Horse-Power Stratagem," and more chapters of Richard Whiteing's "The Yellow Van." Edwin L. Sabin continues his charming series on the life of the American village boy, this month sketching "A Boy's Loves."

For readers of the July Century who want something beside fiction there is no lack of more solid reading. Nothing could be more timely, in view of the bicentennial of Wesley, than the life of the founder of Methodism, by C. T. Winchester, professor of English literature at Wesleyan University, and well known on other platforms as a lecturer. The July issue brings, too, the long expected "Unpublished Letters by Sir Walter Scott," edited by Horace P. Hutchinson, with notes by Mrs. Mary Anne Watts Hughes, to whom the letters were written, and an introductory sketch of Mrs. Hughes by her grandson, Mr. W. H. Hughes, the American brother of the famous "Tom Hughes." Dr. William Hayes Ward answers the question asked by so many since a recent letter of the Emperor William, "Who was Hammurabi?" Hermann Klein's "Modern Musical Celebrities" gives pleasant behind-the-scenes glimpses of Jean and Edouard de Reszke, Tamagno, Lascalle, Augustus Harris and Mme. Nordica.

A. M. Bowman, the proprietor of Bowmont Farms, of Salem, and the popular representative in our State Legislature from Roanoke county and city, has for a number of years been engaged in collecting what he claims to be the best collection of high testing and deep milking Jerseys on the continent, and his herd is attracting the attention of breeders and buyers from all parts of the country, and from foreign countries. He has also recently introduced the large Yorkshire breed of hogs, which are now attracting so much attention as a "bacon breed" in Canada and other districts, where high class bacon is made.

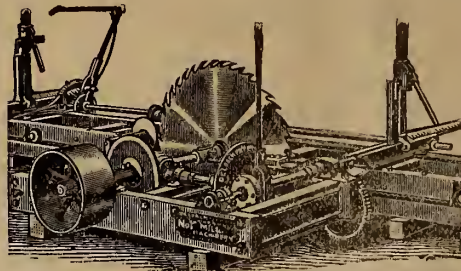
In another column he has an interesting change in his advertisement.

In a little town in Nova Scotia are two churches, situated in the two divisions of the village locally designated as the "North End" and "South End." At a Sunday morning service the officiating clergyman read the following notice:

"There will be preaching at 11 o'clock next Sunday morning in the church at the North End, and at 4 o'clock in the afternoon in the church at the South End. Infants will be baptized at both ends."—*New York Times*.

The DeLOACH Saw Mills are Sure Winners.

Eight sizes, from Farmers' 4 h. p. up to 200 h. p.
If Interested, write for large illustrated catalogue of DeLoach Patent Saw Mills to suit any power from 4 to 200 h. p.; Shingle Mills, Planers, Edgers, Trimmers, Stave and Lath Mills, Bolters, Corn and Buhr Mills, Water Wheels, etc. To introduce our New Farmers' Saw Mill, fitted with DeLoach Patent Variable Friction Feed, we make this special offer:



We will deliver on cars at factory our No. 0 Pony Farmers' Saw Mill, with Duplex Dogs, Improved Head Blocks, and Ratchet Set Works, complete as shown in cut, except it has Carriage made in two 4 foot sections, with Rope Drive instead of Rack and Pinion without Saw or Belt, for \$115.00 Spot Cash!

With 36" Solid Saw, \$127.50; 40", \$132.50; 44", \$140.00; 48", \$150.00.

With 36" Inserted Saw \$147.50; 40", \$152.50; 44", \$160.00; 48", \$170.00.

Best Rubber Belting, 4-ply, 6". 20 cents per foot; 8", 30 cents per foot, NET.

No discount from these prices.

Our Warranty: This mill is warranted to be made in a workman-like manner, of first class material throughout, and to give perfect satisfaction if operated according to our printed instructions, which are so simple that a boy can understand them. Any one with ordinary intelligence can set and operate without the assistance of an experienced sawyer: will easily cut 2 000 to 2,500 feet of first class board lumber per day with only 4 h. p.; 3,000 feet with 6 h. p.; 4,000 feet with 8 h. p.; is adapted to any kind or size power up to 15 h. p.

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The DeLoach is the only mill made that is shipped to all parts of the world. Over 10,000 in use!

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From Fowls of High Merit, Fresh, and a Good Hatch

Guaranteed of the following varieties:—

PLYMOUTH ROCKS, BROWN LEGHORNS, WHITE LEGHORNS and PEKIN DUCKS at \$1.00 per sitting of 15 BRONZE TURKEY EGGS, \$3.00 per dozen.

Jersey and Guernsey Cattle and Berkshire Pigs Four handsome Great Danes and three Fox Terrier Puppies.

M. B. ROWE & CO., - Fredericksburg, Va

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A Fire Insurance Association, chartered by the State of Virginia, for farmers, under an amended and well protected plan.

Insures in counties surrounding and accessible to Richmond, against Fire and Lightning, only country property—no stores or unsafe risks. Policy-holders amply secured—all legitimate losses paid. Average cost per year less than other plans, and a great saving to farmers. Amount of property now insured, \$330,000, and increasing yearly. Estimated security in real and other estate, \$750,000.

For further information, address,
MENTION THIS JOURNAL.

CHAS. N. FRIEND, General Agent,
CHESTER, VIRGINIA.

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Needs an education. Send for Catalogue of WOODLAWN SEMINARY & MUSICAL INSTITUTE, GORDONSVILLE, VA. Beautifully and healthfully situated at the foot of the Blue Ridge Mountains. Prepares for any College or Special School or for Teaching. Beautiful home; thorough instruction. All Grades, including English. Elocution, Music and Art. Expenses very low.

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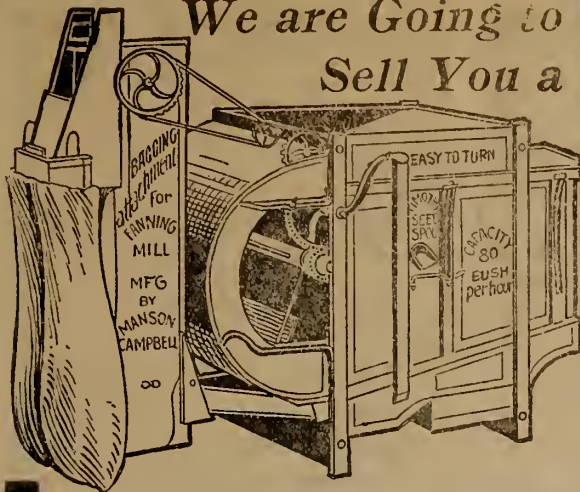
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CHATHAM FANNING MILL

On 60 Days' Approval



to convince you of its superiority over any fanning mill you ever heard of. If that isn't long enough time we will take your **Three Years Note**. **WE KNOW** what the **Chatham** will do for you, how much money it will make, how much it will save you, how strong it is, how easily it runs and the perfect work it accomplishes. It will **clean** and **grade** your seed grain, will enable you to sell your clean grain at the top price, will save the timothy seed from the yearly crop of grain, save the screenings for feed for your stock. **The Chatham** will clean and grade **any kind** of seed or grain. The new bagging attachment saves the work of one man. We have already sold **OVER** one hundred thousand (100,000) of them in every part of the U. S. and Canada, and are not going to stop until we place one in the hands of every farmer, stock raiser and seedsman in North America. We want you to send us your name and address. We will then send you the most instructive book, free,

"How to Make Dollars Out of Wind."

It tells ways of making easy money that you never thought of. We will also outline our **THREE YEARS' Plan** of selling you a **Chatham**. It will surprise you by its liberality and convince you that we believe in our mill. It gives you a chance to let the mill pay you before you pay us for the mill.

Here are some of the things others have done with the help of the **Chatham Fanning Mill**:

Fred Dietz, Ransomville, N. Y., got \$103 cash for timothy seed out of his wheat, and didn't know there was any there.

O. E. Perkins, Hallsport, N. Y., got \$550 more for 1000 bushels of wheat than his neighbor did. Perkins used the **Chatham**; neighbor didn't.

D. M. Bethune, Bethune, S. C., obtains \$1 extra on every 100 pounds of rice by using the **Chatham**.

G. Woodring, So. Charleston, O., secured \$157 worth of grass seed from cleaning up the refuse in barn floors and mangers.

Read this letter from the Superintendent of the High Shoals Manufacturing Company.

Now write us and get that **free book** and our proposition to make you money. Address

M. CAMPBELL FANNING MILL CO., Ltd., Manufacturers of the Chatham Fanning Mill **116 Wesson Avenue, Detroit, Mich.**

HIGH SHOALS MANUFACTURING COMPANY,

MANUFACTURERS OF

YARNS, SHIRTINGS, CHECKS, STRIPES, ETC.

SHIPPING AND EXPRESS DEPT.

DETROIT, MICH.

Talmage Hardware Co.,

Agents for Chatham Fanning Mills, *High Shoals, Ga.*, May 25th, 1903
Athens, Ga.

Gentlemen:

The Chatham Fanning Mill bought of you is by far a more valuable machine than I first thought. As you know I did not get this machine until after I had begun to plant my cotton. When the Fanning Mill arrived, in order to test its merits, I fanned out a lot of the remainder of the seed of my cotton and to my surprise on looking over the farm I found that the seed fanned before planting came up a great deal better, in fact one would not believe that the Fanning Mill would make such a difference. In addition to the stand of cotton I saved at least one-third of the seed. I do not think that I can afford to do without this machine even at double the price I paid for it. I have had several of my neighbors to fan their seed and they all speak in the highest of terms so far as they can see at present. I have only used it of cotton seed and fanning peas, and as stated above I would not think of doing without it at even twice the cost.

Diet. to V. G.

Yours respectfully,

A. J. Baxter, Supt.

CATALOGUES, ETC.

International Harvester Company of America (McCormick Division), Chicago Ill. King Corn. The McCormick Corn Binder.

American Devon Cattle Club. Year Book for 1903.

Kentucky State Fair, Owensboro, Ky., September 21-26, 1903. Premium List.

The Nutgrowers Association, DeWitt, Ga., invite attention to the subject of nut trees for timber. In the Nutgrower for March, 1903, there is an interesting article dealing with the subject.

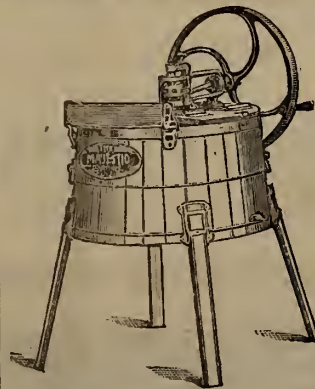
LIFE'S PROBLEMS.

Marion has reached the age when the problems of life assume interesting proportions.

"I was born in Washington, D. C., grandmother. Where were you born?" she asked recently.

"Way out in Kansas," answered the old lady.

"Father was born in New Orleans," continued the child, "and mother in Denver. Do you know?"—reflectively—"it seems to me people are liable to be born most any place."—*May Lip-pincott's Magazine.*



A WASHING MACHINE is as great a necessity in the house as a wringer

THE MAJESTIC ROTARY WASHER

has too many good points for explanation in an advertisement. Your name on a postal card will bring our booklet, with full particulars of our six different machines and how to get them. One of them will certainly please you. All are made with electrically welded wire hoops sunk in grooves—our patent. Being the largest manufacturers of woodenware in the world, we can make better machines for the money than any one else. If you want a machine that washes, buy one of ours.

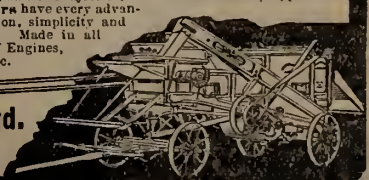
THE RICHMOND CEDAR WORKS, Richmond, Va.

There is no record of a FARQUHAR BOILER ever exploding.

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The Farquhar threshing machinery is the perfected product of the pioneer manufacturers of Grain Separators and Threshing Engines. It's the most durable and cheapest threshing outfit a farmer can buy. The Celebrated Ajax Threshing Engine, made in sizes from 14 p. up, have seats, foot brakes, and two injectors. Provided with every approved safety appliance. Farquhar Separators have every advantage of capacity, thoroughness of separation, simplicity and durability. Every part thoroughly tested. Made in all styles and sizes. Send for free catalogue of Engines, Threshing Machinery, Saw Mills, etc.

A. B. Farquhar Co., Ltd.
York, Pa.



REPORTS.

- U. S. Department of Agriculture, Washington, D. C. A Directory for farmers, with weather conditions. Crop injuries for 1902.
- Bureau of Plant Industry, Bulletin 41. The Commercial Grading of Corn.
- Bureau of Soils, Bulletin 21. Reclamation of Alkali Lands in Egypt.
- Office of Experiment Stations, Experiment Station Record, Vol. XIV., No. 10.
- Farmers Bulletin 169. Experiment Station Work.
- Farmers Bulletin 170. Principles of Horse Feeding.
- Farmers Bulletin 171. The Control of the Codling Moth.
- Farmers Bulletin 172. Scale Insects and Mites on Citron Trees.
- Kentucky Experiment Station, Lexington, Ky. Bulletin 105. The Broom Rapeseed.
- Bulletin 106. Feeding Dairy Cows.
- Louisiana Experiment Station, Baton Rouge, La. Fifteenth Annual Report.
- New York Experiment Station, Geneva, N. Y. Bulletins 220 and 227. Popular Edition. Apple Troubles in 1902.
- Bulletins 223 and 224. Popular Edition. Gsape Pollen and Pollination.
- Bulletin 225. Popular Edition. Rusty Spot and a Remedy.
- Bulletin 226. Popular Edition. Two New Raspberry Diseases.
- Ohio Experiment Station, Wooster, Ohio. Bulletin 140. The Corn Crop.
- South Carolina Experiment Station, Clemson College, S. C. Bulletin 75. Cotton.
- Bulletin 79. A Rotation Study.
- Bulletin 80. Analysis of Commercial Fertilizers.
- South Dakota Experiment Station, Brookings, So. Dak. Bulletin 76. A Study of Northwestern Apples.
- Bulletin 78. Fritted Tape Worm of Sheep.
- Virginia Weather Bureau, Richmond, Va. Report for May, 1903.
- Imperial Department of Agriculture for the West Indies, Barbadoes, W. I. Agricultural News.

EQUALS.

Mr. Jones was a deacon in the Methodist church, his religion being reserved for the Sabbath. One day he overheard a workman swearing, and he stopped to argue with him on the enormity of his sin. "Oh well," said the man, "you pray a little and I swear a little, and we don't either of us mean anything."—Mary H. Northend, in July Lippincott's.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

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Own Wool on Shares
Or for Cash

White or Gray
Large or Small
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Leaksville, N. C.

SEND US YOUR WOOL
WE PAY THE FREIGHT.
WRITE FOR CATALOGUE.

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IS SO NECESSARY TO THE

FARMER AND STOCK RAISER

that he cannot afford to be without the
best means of pumping it.

ADVICE FREE

if application is made to us.

Rams, Windmills, Gasoline Engines
for pumping and farm use

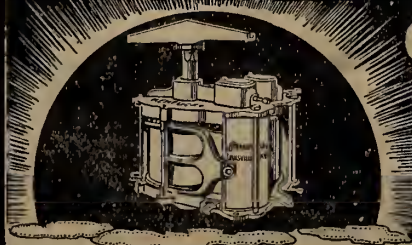


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Cane Mills

FOR OVER 40 YEARS have been the recognized STANDARD in Cane Mill construction. They are imitated, of course, but they stand alone and supreme in these essential points:

PERFECTION OF MECHANICAL DETAIL.—STRENGTH IN EVERY POINT.—SAVING IN REPAIRS.—SIMPLICITY.—COVERED OIL CHANNELS IN BOTTOM PLATE.—PATENT REVERSIBLE FEED GUIDE.—ENCASED GEARINGS.—DO MOST WORK WITH LEAST POWER.

There is metal where metal is needed, together with skilled workmanship and practical knowledge of syrup makers' requirements. Write for complete Cane Mill and Evaporator Catalog, S-60.

AMERICAN SEEDING MACHINE CO., KENTUCKY BRANCH, Successors to Brennan & Co., LOUISVILLE, KY.

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Headquarters for GOLDEN LAD JERSEYS,

Also Get of TREVARTH and GEN. MARIGOLD. ❀ ❀ ❀

GOLDEN LAD'S SUCCESSOR. First and sweepstakes over all at the Pan-American Exposition, the champion JERSEY BULL OF AMERICA, and out of Golden Ora, our great prize-winning cow, both born and developed on these Farms, is among our service bulls.

Biltmore Jerseys are a combination of large and persistent milking qualities with an individuality that wins in the show ring.

SPECIALTY. Write for descriptive circular of the best lot of young bull calves ever offered, both for breeding and individuality. They are by noted sires and out of large and tested selected dams. Many of these calves are fit to show and win in any company.



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SPECIALTY. Write for descriptive circular of eggs from our prize-winning pens. Over 50 yards to select from, made up of the winners at the leading shows for the last two seasons. If you want winners you must breed from winners.

Headquarters for the best IMPORTED ENGLISH BERKSHIRES.

APPLY TO *BILTMORE FARMS, BILTMORE, N. C.*

IMPERIAL FRUIT AND POULTRY FARM

Is now booking orders for Eggs from the best strains and careful matings of

Barred, Buff and White Plymouth Rocks,

Silver=Laced and White Wyandottes,

S. C. B. Leghorns and Mammoth Pekin Ducks,

AT \$1.00 PER SITTING.

EGGS FROM BLACK DEVIL PIT GAMES.

Never known to run. The grittiest of all games. **\$2.00 PER SITTING.**

We give 15 Chicken and 13 Duck Eggs for sitting. **Order at once.**

Write name and address plainly. Remember the express is no more on 2 or 3 sittings than on 1.

Refer to Augusta National Bank and former patrons. Satisfaction guaranteed or money refunded

P. H. HEYDENREICH, - Staunton, Va.

Two years ago Lippincott's Magazine published a "Complete Novel" called "The Lifting of a Finger," which made a decided hit. The July number now contains another novel from the same pen, that of Ina Brevoort Roberts. Like its predecessor, "The Pretenders," is a tale of modern society treated with the same brightness and charm, yet showing a great advance in the handling of delicate situations and subtleties in plot. Mrs. Roberts surely has the gift for "making love." Those who are "in the game" say she does it just right. For a journey on cars or boat this story is an ideal pastime.

All short stories in the July Lippincott's are suited to the "good old summer-time" when one is not ashamed to confess he wants something not solid but entertaining. After the novel there is a touching little tale of a girl to whom a passing flirtation on the man's side means eternal remembering on hers. She can boast that "her mother had been a Boston woman," too! Its title is "The Broken Vase," and its author, Marcelle Endicott. Henry Wysham Lanier, the gifted son of Sidney Lanier, contributes "The Odyssey of Piscator," a fishing story. The sportsman's pursuit of his fascinating "Peri" rivals that of his avowed sport and makes of him quite a globetrotter. Girl athletes of the present day have very well-defined ideas of what comes up to their standard in masculinity, and woe betide the man who falls short. "The Modern Sabine," by E. Ayrtton, is an instance of this in which the exacting heroine finds she has not "exercised" her heart out of her body, after all, and it joyfully asserts itself in an unusual but no less convincing manner. Agnes Louise Provost's story called "Jacky" is cheerful evidence of the theory that no man is thoroughly bad. It is told with spirit.

The labor story by Edith Robinson, called "The Vanderdonck, Sandbank" (where the scene is Schenectady, N. Y.), stands for right on both sides. It should be read by laborer and capitalist, and by those in between, because it is a really good story.

FRECKLE PROOF.

Little Marie hated freckles, and with good reason, for she was like the proverbial turkey egg. Her small nurse, Rhody, was as black as tar, except her beautiful white teeth.

One day Marie said regretfully, "Wisht I was black like you, Rhody; aint nowhere for you to get freckles 'cept your teeth."—Florida C. Orr, in July Lippincott's.

Best for medicinal uses

Your physician will tell you that you should always have some good whiskey in the house. For accidents, fainting spells, exhaustion, and other emergency cases, it relieves and revives. But you must have good whiskey, pure whiskey, for poor whiskey, adulterated whiskey, may do decided harm. HAYNER WHISKEY is just what you need for it goes direct from our own distillery to you, with all its original strength, richness and flavor, carrying a UNITED STATES REGISTERED DISTILLER'S GUARANTEE of PURITY and AGE and saving the dealers' enormous profits. We have over a quarter of a million satisfied customers, exclusively family trade, who know it is best for medicinal purposes and prefer it for other uses. That's why YOU should try it. Your money back if you are not satisfied.

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Saves Dealers' Profits! Prevents Adulteration!

HAYNER WHISKEY

PURE SEVEN-YEAR-OLD RYE

4 FULL \$3.20 EXPRESS
4 QUARTS 3 PREPAID

We will send you FOUR FULL QUART BOTTLES of HAYNER'S SEVEN-YEAR-OLD RYE for \$3.20, and we will pay the express charges. Try it and if you don't find it all right and as good as you ever used or can buy from anybody else at any price, send it back at our expense and your \$3.20 will be returned to you by next mail. Just think that offer over. How could it be fairer? If you are not perfectly satisfied you are not out a cent. Better let us send you a trial order. If you don't want four quarts yourself, get a friend to join you. Shipment made in a plain sealed case with no marks to show what's inside.

Orders for Ariz., Cal., Col., Idaho, Mont., Nev., N. Mex., Ore., Utah, Wash. or Wyo. must be on the basis of 4 Quarts for \$4.00 by Express Prepaid or 20 Quarts for \$16.00 by Freight Prepaid.

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 GERMAN MILLET,
 BUCKWHEAT,
 OATS and
 CANE SEED.

"Whatsoever One Soweth, That Shall He Reap."

We sell strictly reliable **FIELD AND GARDEN SEEDS** of every variety at **Lowest Market rates**, included in which are **RAGLAND'S PEDIGREE TOBACCO SEEDS.**

WE ALSO SELL

Our Own Brands of Fertilizers

For Tobacco, Corn, Wheat, Potatoes, &c.

Pure Raw-Bone Meal, Nova Scotia and Virginia Plaster and Fertilizing Materials generally.

Parties wishing to purchase will find it to their interest to price our goods.
 Samples sent by mail when desired.

Wm. A. Miller & Son,

1016 Main Street,
 LYNCHBURG, VA.

Headquarters for Nursery Stock.

We make a specialty of handling dealers' orders.

ALL STOCK TRUE TO NAME.

Apples.	Nectarines,	Pecans,	Ornamental and
Pears,	Cherry,	Chestnuts,	Shade Trees,
Peach,	Quinces,	Walnuts.	Evergreens,
Plum,	Almonds,	Small Fruits,	Roses, Etc.
Apricots,			

CALIFORNIA PRIVET, for Hedging.

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... AGENTS WANTED. ...

FRANKLIN DAVIS NURSERY CO., Baltimore, Md.

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The following list of papers and periodicals are the most popular ones in this section. We can **SAVE YOU MONEY** on whatever Journal you wish.

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	Price. With Alone. Planter.
Times-Dispatch, Richmond, Va.....	\$5 00 \$5 00
The Post, Washington, D. C.....	6 00 6 00
The Sun, Baltimore, Md.....	3 00 3 40
News-Leader, Richmond, Va.....	3 00 3 00

TRI-WEEKLY.

The World (thrice-a-week), N. Y....	1 00 1 25
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WEEKLIES.

Harper's Weekly	4 00 4 00
Harper's Bazaar	1 00 1 40
Montgomery Advertiser	1 00 1 60
Nashville American	50 75
The Baltimore Sun	1 00 1 35
Breeder's Gazette	2 00 1 75
Hoard's Dairyman	1 00 1 35
Country Gentleman	1 50 1 75
Central Presbyterian, " "	2 00 2 25
Religious Herald, Richmond, Va.....	2 00 2 25
Times-Dispatch, Richmond, Va.....	1 00 1 25
Christian Advocate, " "	1 50 1 75
Horseman	3 00 3 00

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Wool Markets and Sheep	50 75
Dairy and Creamery	50 75
Commercial Poultry	50 75
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North American Review	5 00 5 00
The Century Magazine	4 00 4 25
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Lippincott's Magazine	2 50 2 50
Harper's Magazine	4 00 4 00
Feruin Magazine	3 00 3 25
Scribner's Magazine	3 00 3 25
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Cosmopolitan Magazine	1 00 1 35
Everybody's Magazine	1 00 1 35
Munsey Magazine	1 00 1 35
Strand Magazine	1 25 1 65
McClure's Magazine	1 00 1 35
Argosy Magazine	1 00 1 35
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The seed plantations around San Jose, Cal., are said to receive \$3,000,000 a year from the sale of seed. The first experiment of the planters in this line was made less than a half dozen years ago. One onion patch now covers three thousand acres, with furrows almost two miles long. A single plot of sweet peas occupies eight hundred acres, a bed of yellow asters 210 acres, a lettuce bed 2,100 acres. There are within a radius of eighty miles around San Jose 14,500 acres devoted to raising plants and flowers for their seed alone.

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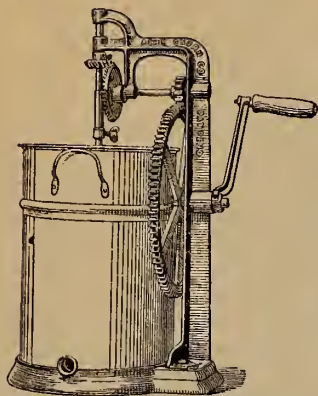
We want information from every reader on the above questions, and shall be very glad to have you clip this advertisement out, fill it in and send it to this publication. On its receipt we will put in your hands a beautiful illustrated booklet on the fanning mill question, free of cost.

Editor, Southern Planter.

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THE ACME CHURN.

MILK AERATOR and CREAM SEPARATOR.



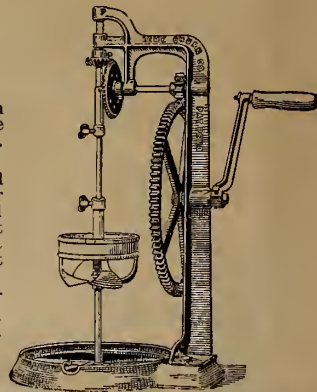
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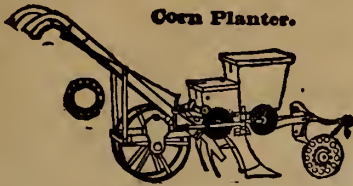
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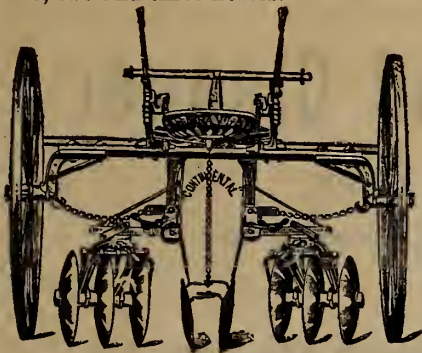


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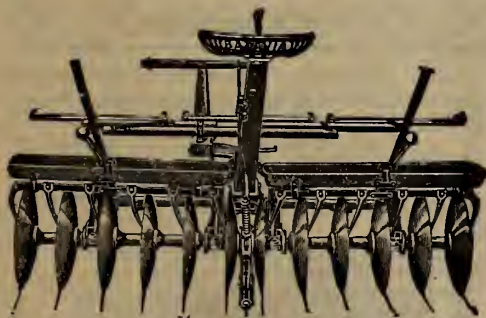


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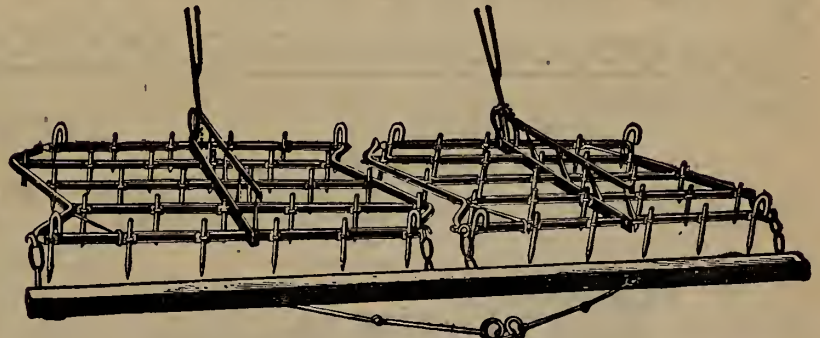
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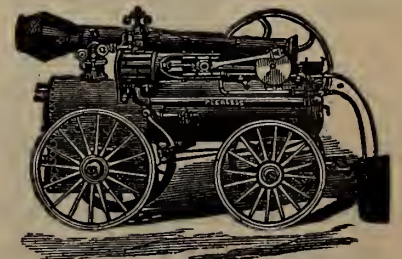
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Daisy Flour, bbl	4 00	Soda Crackers	4 1/2	Grape Tobacco, 3 plugs	25
Good Family Flour	3 75	6 lbs. Lump Starch	25	Old Peach Tobacco, 3 plugs	25
Good Rice	4 1/2	11 large bars Soap	25	Ward Brand Tobacco, 3 plugs	25
Country Meal, peck	18	12 cakes Toilet Soap	25	200 lbs. Sack Salt	85
or bushel	70	Lem. Cling Peaches, can	15	Ice Cream Salt, sack	80
Mountain Butter, lb	17	4 cans assorted Soup	25	Currants, lb	06
Cooked Ham	12 1/2	Large bottle Honey	09	Pure Pepper, lb	15
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3 cans 3 lb. Peaches	25	7 cans Sardines	25	Syrup, gallon	35
Large Jars Mustard	08	Arbuckle's Coffee	9 1/2	N. O. Molasses, gal	40
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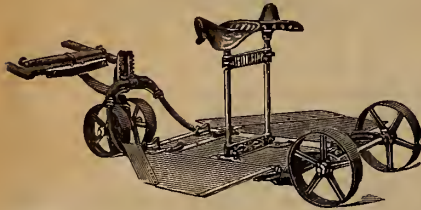
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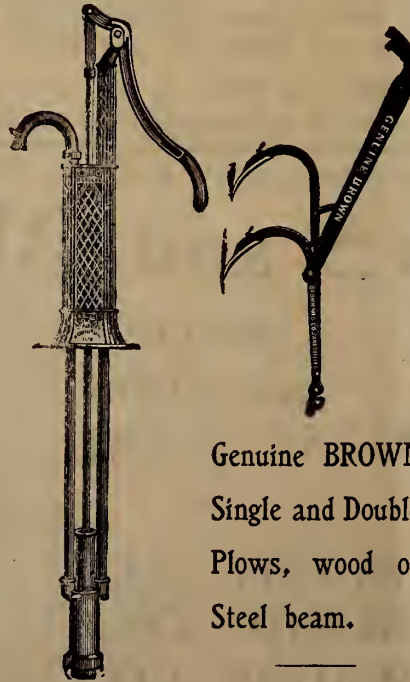
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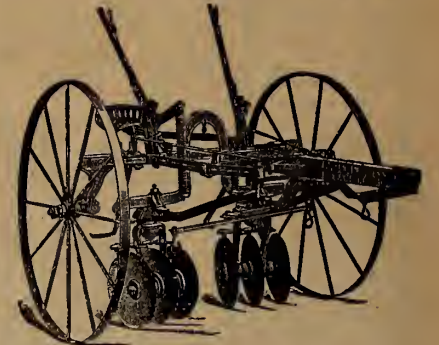
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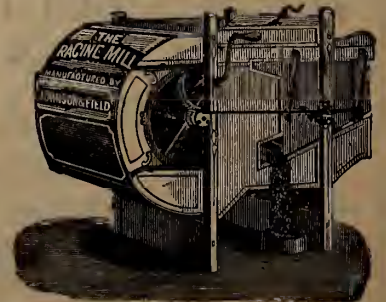
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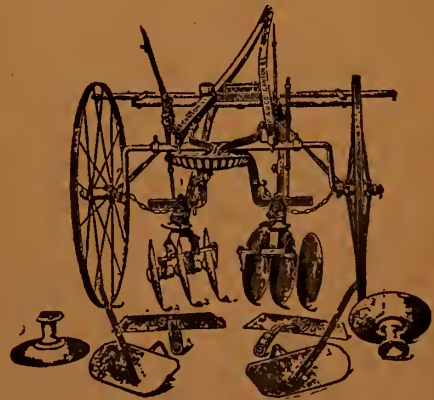
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